

INTERNATIONAL INSTITUTE OF AGRICULTURE
BUREAU OF AGRICULTURAL INTELLIGENCE AND PLANT DISEASES

INTERNATIONAL REVIEW
OF THE SCIENCE
AND PRACTICE OF AGRICULTURE

MONTHLY BULLETIN
OF AGRICULTURAL INTELLIGENCE AND PLANT DISEASES

INDEX 1916



ROME
PRINTING OFFICE OF THE INSTITUTE
1918

PREFACE

This index, though arranged alphabetically, retains the grouping of the subjects used in the *International Review*. The arrangement of the subjects in each group is in chronological order of publication, except in the case of those relating to Agricultural Development, where the alphabetical arrangement was considered more useful.

Except in the case of the original articles, which are numbered according to their pages, the numbers of each subject refer to the paragraphs in the *International Review*.

The index consists of three parts: one, of the original articles, one concerned only with Agricultural Intelligence and the last with Plant Diseases.

This volume of contents has been prepared by the redacteur
Dr. Giulio Provenzal.

THE INTERNATIONAL INSTITUTE OF AGRICULTURE

ORIGIN OF THE INSTITUTE AND SUMMARY OF THE INTERNATIONAL TREATY.

The International Institute of Agriculture was established under the International Treaty of 7 June 1905, which was ratified by forty governments. Sixteen other governments have since adhered to the Institute.

It is a Government institution in which each country is represented by delegates. The Institute is composed of a General Assembly and a Permanent Committee.

The Institute, always confining its attention to the international aspect of the various questions concerned, shall:

(a) collect, study, and publish as promptly as possible, statistical technical, or economic information concerning farming, vegetable and animal products, trade in agricultural produce, and the prices prevailing in the various markets;

(b) communicate the above information as soon as possible to those interested;

(c) indicate the wages paid for farm work;

(d) record new diseases of plants which may appear in any part of the world, showing the regions infected, the progress of the diseases, and, if possible, any effective remedies;

(e) study questions concerning agricultural co-operation, insurance and credit from every point of view; collect and publish information which might prove of value in the various countries for the organization of agricultural co-operation, insurance and credit;

(f) submit for the approval of the various governments, if necessary, measures for the protection of the common interests of farmers and for the improvement of their condition, utilizing for this purpose all available sources of information, such as resolutions passed by international or other agricultural congresses and societies, or by scientific and learned bodies, etc.

PERMANENT COMMITTEE

OF THE INTERNATIONAL INSTITUTE OF AGRICULTURE

President: Marquis RAFFAELE CAPPELLI, Delegate of Italy.

Vice-President: M. LOUIS-DOP, Delegate of France.

List of the Delegates of the Permanent Committee:

1	ABYSSINIA	V	Prof. G. CUBONI, Director, Station of Plant Pathology, Rome.
2	ARGENTINE REPUBLIC...	I	Dr. OCTAVIO PINHEIRO SORONDO.
3	AUSTRIA	I	Chev. V. DE POZZI, Government Councillor.
4	HUNGARY	I	
5	BELGIUM	IV	O. BOLLE.
6	BRAZIL		
7	BULGARIA	III	M. STANCIOFF.
8	CABLE	II	M. E. VILLEGAS, Minister Plenipotentiary.
9	CHINA	I	WANG-TSUNG-SER.
10	COLOMBIA	V	Don RUFO RUFFO, Principe DELLA SCALETTA.
11	COSTA-RICA	V	MARCO BESSO.
12	CUBA	V	M. A. MARTIN RIVERO, Minister Plenipotentiary.
13	DENMARK	IV	A. DE OLDENBURG, Chargé d'affaires.
14	ECUADOR	V	M. MIGUEL VALVERDE, Consul General.
15	EGYPT	II	
16	FRANCE	I	LOUIS-DOP, Vice-President of the Institute.
17	FRENCH WEST AFRICA ..	V	LOUIS-DOP.
18	ALGERIA	V	LOUIS-DOP.
19	MADAGASCAR	V	LOUIS-DOP.
20	MOROCCO	V	LOUIS-DOP.
21	TUNIS	V	LOUIS-DOP.
22	GERMANY	I	Dr. T. MUELLER, Privy Councillor.
23	GT. BRITAIN & IRELAND..	I	Hon. WILLIAM ERSKINE, Counsellor of the Embassy.
24	AUSTRALIA	III	Hon. WILLIAM ERSKINE.
25	BRITISH INDIA	II	Hon. WILLIAM ERSKINE.
26	CANADA	II	Hon. WILLIAM ERSKINE.
27	MAURITIUS	V	Hon. WILLIAM ERSKINE.
28	NEW ZEALAND	IV	Hon. WILLIAM ERSKINE.
29	UNION OF SOUTH AFRICA	IV	Hon. WILLIAM ERSKINE.
30	GREECE	IV	M. COROMILAS, Minister Plenipotentiary.
31	GUATEMALA	V	G. MONTEPIORE, Consul General for Guatemala.
32	ITALY		Marquis R. CAPPELLI, Vice Pres. of the Ch., Pres. of the Institute.
33	ERITREA & IT. SOMAL.	IV	
34	TRIPOLI AND CYRENAICA	IV	
35	JAPAN	I	SHINOOH IMAI, First Secretary of the Embassy.
36	LUXEMBURG	V	O. BOLLE, Delegate of Belgium.
37	MEXICO	III	
38	MONTENEGRO	V	G. VOLPI, Minister Plenipotentiary.
39	NETHERLANDS	IV	Baron W. B. R. de WELDEREN RENGERS, Minister Plenip.
40	DUTCH EAST INDIES...	IV	Baron W. B. R. de WELDEREN RENGERS.
41	NICARAGUA	V	V. E. BIANCHI, Consul General.
42	NORWAY	IV	Dr. A. FJELSTAD, Counsellor to the Agricultural Department.
43	OTTOMAN EMPIRE	I	Dr. MEHMED DJEMIL BEY.
44	PARAGUAY	V	
45	PERSIA	IV	A. DEL GALLO, Marquis of ROCCAGIOVINE.
46	PERU	V	LOUIS-DOP, Delegate of France.
47	PORTUGUESE	I	EDUARDO LEAO, Minister Plenipotentiary.
48	ROMANIA	I	DEMETRIOS C. PRINCESCO, Counsellor to the Legation.
49	RUSSIA	I	His Excell. G. ZABIKILO, Consul General for Russia.
50	SALVADOR	V	A. BIANCHI CAGLIESTI, Vice-Consul.
51	SAN MARINO	V	His Excell. L. LUZZATTI, Minister of State.
52	SERBIA	III	C. SCOTT, Consul General for Serbia.
53	SPAIN	I	FRANCISCO BILBAO SEVILLA, Agricultural Engineer.
54	SWEDEN	IV	Baron C. N. D. DE BILDT, Minister Plenipotentiary.
55	SWITZERLAND	IV	M. DE PLANTA, Minister Plenipotentiary.
56	UNITED STATES	I	DAVID LUBIN.
57	URUGUAY	V	Dr. R. ROVIRA, Consul.

Secretary General: Prof. CARLO DRAGONI.

CONTENTS

PREFACE	Page	3
I. — Index of Original Articles		9
II. — Index of Agricultural Intelligence:		
A) Subjects		11
B) Authors.		57
III. — Index of Plants Diseases:		
A) Subjects		69
B) Authors.		107

I. — INDEX OF ORIGINAL ARTICLES

- ABELLA ARTURO. - Dairying in Uruguay, *page 629.*
- BERLESE ANTONIO. - Entomophagous Insects and their Practical Employment in Agriculture, *page 321.*
- DANNFELT H. JUHLIN. - The Present State of Agriculture in Sweden, *page 921.*
- DE LANDGRAF, JEAN. - Fishing and Fish Culture in Hungary, *page 180.*
- INTERNATIONAL INSTITUTE OF AGRICULTURE. - The International Trade in Feeding Stuffs, *page 467.*
- LAWLER, J. - Historical Review of Canada's Timber Industry, *page 1227.*
- LEWIS, R. G. - The Forest Trees of Canada, *page 1234.*
- MALET. - Organisation of Agricultural Services in the French Zone of the Empire of Morocco, *page 1565.*
- PATANÈ GIOVANNI. - The Selection of Cereals in Italy, *page 777.* Selection and Hybridisation of American Vines in Italy, *page 1393.*
- PEROLD, A. I. - Viticulture in South Africa, *page 1.*
- PRIEGO, J. M. - Olive-growing and Production in Spain, *page 1727.*
- ROSSI GIACOMO. - Industrial Retting of Textile Plants by Microbiological Action, *page 1067.*
- STUPART, R. W. and MILLS, R. W. - Meteorology in Relation to Agriculture in Canada, *page 177.*

II. — AGRICULTURAL INTELLIGENCE

A) INDEX OF SUBJECTS:

- ACIDOSIS, 196.
Adenium coetaneum, 45.
Adiantum vasica, 1082.
 Adulteration and Fraud: Method for Detecting the Admixture of Goat's Milk to the Milk of Cows, 342. New Method of Detecting Adulteration in Tea, 1285. Wheat Offals and their Adulteration, 1322.
Aeschynomene americana, 493.
Agave see *Sisal*.
 Agricultural Botany see Chemistry and Plant Physiology.
 Agricultural Education see Education.
 Agricultural Improvements: Compensation Claims under the Agricultural Holdings (Scotland) Act 1908, 1. Agricultural improvements in the Roman Campagna, 3. Blueberry Culture as a Means of Utilizing Acid Soils, 271. The Value of *Saccharum spontaneum* in Binding Moving Sands in Sicily, 491. Agricultural Improvements in Sweden, page 921. Reclaiming the Everglades of Florida, 1259.
 Agricultural Institutions: Viticultural Experiment Station, Oenological Institute, Cooperative Wineries in South Africa, page 23.
 The Bureau of Applied Botany attached to the Scientific Committee of the Russian Ministry of Agriculture, 613. The Agronomic Institute of Santiago, 957. Blind Soldiers on the Land, 1058. Agricultural Services in the French zone of the Empire of Morocco, page 1565.
Agrostemma Githago, 968, 1191.
Agrostis stolonifera, 398.
 Akkrot, 1082.
 Alang alang, 148.
 Alcohol, see Distillery.
 Altalfa see Lucerne.
 Algarobilla, 498.
 Algeria: Studies on Bovine Piroplasmiasis, 75. Production of Manna by Olive Trees, 405. The Eucalyptus in Algeria, 876.
 Almond: East Indian almonds, 65. Almond Growing and Trade in California, U. S., 456.
 Aloes: Production in Italy, 757.
Alopecurus pratensis, 398.
Alstroemeria Ligna, 498.
 Amurca, 445.
Anacardium, 65.
 Analysis of Agricultural Products: The Localisation of Acids and Sugars in Fleshy Fruits, 19. Camphor

- and Camphor Oil from Malaya, 49. Analysis of Tea Grown in Russia, 54. Baco's Vine Hybrids in Charente, France, 69. The Effect of Feeding on the Composition of Milk and Butter : Linseed Cake and Hempseed Cake, 85. The Effect of the Density of a Wheat upon its Flour Yield, 106. Value of Lime Seed as a By-product of the Lime Industry, 107. The Chemical Composition of Hungarian Honey, 113. A Soil Sampler for Soil Bacteriologists, 143. Wheat Growing Competitions in the Roman Campagna, 165. Chemical Composition of the Autumn Leaves of the Mulberry, 176. Fruit of *Anona Cherimolia* Mill., 181. The Absorption of Ammoniacal Gas by Superphosphates and the Use as Fertilisers of the Phosphates thus obtained, 272. Composition of *Panicum Sanguinale*, 296. Method for Detecting the Admixture of Goat's Milk to the Milk of Cows, 342. The Microscopic Analysis of Meat and Fish Meals, 343. The Milling of Rice and Its Mechanical and Chemical Effect upon the Grain, 444. The Utilisation of the Residues of Oil Extraction from Olives, 445. Composition of the Tomato Fruit, 502. The Composition of Italian Wheats, 509. The Tannin Contents of some Queensland Barks, 521. The Chemical Composition of Fern-root (*Pteris aquilina*), 541. Chemical Composition of "Potassic Ash", 623. Composition of Fallen Leaves of Forest Trees and Their Quantities, 653. Percentage Composition of "Miciuratu", 680. Percentage Composition of "Lahen Raieb", 680. The Viscosity of Beeswax and the Substances used for its Adulteration, 682. Composition of Banana Stalks and Skins, 737. Results of Henna Analyses, 756. Percentage Composition of the Kernels of the "Pili" Nut, 760. Percentage Composition of the Brazilian Pitanga, 761. The Determination of the Iodine Index of Alcoholic Liquids, 796. Recent Investigations at the Imperial Institute in London, in reference to Maximiliana Fruits, Tobacco, Coffee, Medicinal and Poisonous Plants, and Silk, 841. Chemical Composition of the Fruit of *Diospyros virginiana*, 872. The Composition of Silage, 880. Percentage Composition of the Food from the Fruits of *Phylelephas* 881. The Composition of Birch Wood, 882. A Palm Fruit Used for Flavouring Brandy, 911. Chemical Composition of some Species of *Paspalum*, 978. Chemical Composition of the Hay of *Tricholaena rosea* and *Phleum pratense*, 979. Gum-yielding Plants of Brazil, 985. Chemical Composition of the 3 components of the Maize Grain, 1017. Composition of Cherry Kernel Cake, 1020. Composition of Bulgarian Cheese, 1024. The Chemical Composition of Plants as a Guide to the Fertility of the Soil, 1061. Chemical Composition of Alfalfa as Affected by Stage of Maturity, Mechanical Losses and Condition of Drying, 1076. Analysis of Cotton at the Chief Stages of its Development, 1079. Composition of Naked Barley from Cyprus, 1162. Composition of Fish Meal, 1301.
- Anany, 864.
- Anaplasma marginale*, 75.
- Anatomy and Physiology of Livestock : Acidosis in Omnivora and Herbivora, 196. On the Chemical Changes in the Intestinal Content from the Beginning of the Colon to the Rectum, 197. Experimental

- Studies of Castration: its Effects on Oxygen Exchange of the Tissues, 622. Osmotic Equilibrium between Blood and Milk in the Cow, 769. *See also* Feeds and Feeding.
- Andiroba, 864.
- Andropogon Nardus*, 382.
- Andropogon Sorghum*, *see* Sorgho.
- Angicos, 985.
- Aniim, 266.
- Anona*: Chemical Composition of the Fruits of *Anona Cherimolia* Mill., 181. Plant Breeding in Cuba, 396.
- Anthostema senegalensis*, 48.
- Antidesma bunius*, 760.
- Antirrhinum*, 1070.
- Anthoxanthum odoratum*, 398.
- Anthrax in Swine, 80.
- Apiculture, *see* Bee Keeping.
- Apples: Frost Protection for Fruit and Vegetables in the United States, 5. Apple Breeding in Idaho, 30. Results obtained with Different Fruits by Cross-Pollination, 61. Methods of Encouraging Cider Apples to Bear Every Year, 63. Value of Farm Products in the United States, 103. Apple Orchards in the North West of the United States, 178. Economics of Apple Orchard-ing in the Pacific Northwest, 224. Soils of Massachusetts and Connecticut with Especial Reference to Apples and Peaches, 307. Dwarf Apples, 526. Motor-Driven Apple Grading Machine of High Capacity, 787.
- Apricots: Pollination of Fruit-trees, 61. *see also* Fruit Growing.
- Araucaria imbricata*, 498.
- Arboriculture: Pollination of Fruit-trees, 27. Tree-Felling by Machinery, 550. Economic Desirability of Tree Planting in Grasslands, 975. *See* Fruit Growing.
- Arctocarpus odoratissima*, 760.
- Argas persicus*, 318.
- Argentine Republic: Herd Books of the Argentine Rural Society, 202. The International Trade in Feeding Stuffs, *page* 467. Regulations, adopted by the Argentine Rural Society for Registering Milk Records of Dairy Cows, 667. Forage Plants in Argentina, *Paspalum* spp. 978. The Dairy Industry in Argentina, 1021.
- Arrisourso, 266.
- Artichoke as a Forage Plant, 1078.
- Arusa, 1082.
- Aspergillus* spp., 227.
- Asses, Spotted, 771.
- Astrocaryum vulgare*, 864.
- Attalea Cohune*, 1280.
- Australasia's Wool Clip, 111.
- Australia: The Maize Producing Industry in Victoria, 33. Features of the Sheep Industries of the United States, New Zealand, and Australia Compared, 204. The International Trade in Feeding Stuffs, *page* 467. Testing of Agricultural Seeds in South Australia, 397. Wheat-growing on the Share-farming System in the State of Victoria, Australia, 907. Egg-laying Competition, 1000. Dairying on the River Murray Areas, 1196.
- Austria: Manurial Experiments in a Woodland Nursery, 186. Canadian Musk Rat (*Fiber zibethicus*) Injurious to Fish in Austria, 215. The International Trade in Feeding Stuffs, *page* 467. Increase of Yield of the Soil in the Alpine Regions of Salzburg, 793. Cereal Selection in Croatia, Austria Hungary, 1172.
- Automatic Watering of Dairy Cows, 1009.
- Avena elatior*, 398.
- Avicennia nitida*, 266.
- Aviculture: Two Pheasant Crosses, 424. *See also* Poultry, Eggs.
- Avocado: Seeds and Plants imported

- into United States, 388. Plant Breeding in Cuba, 396.
- Azotobacter*, see Bacteriology and Soil Organisms.
- BABESIA CABALLI, 74.
- Babesiosis, 74.
- Bacaba, 864.
- Bacabao, 864.
- Bacillus ovisepticus*, 77.
- Bacteriology and Soil Organisms :
Soil Sampler for Soil Bacteriologist, 143. Effect of Phosphates and Sulphates on Soil Bacteria, 144. Activity of Soil Protozoa, 269. Experiments in Disinfecting Marshland in Germany, 270. Experiments on the Growth of *Azotobacter*, 617. Relation of Carbon Bisulphide to Soil Organisms and Plant Growth, 728. Factors influencing the Survival of Dried Soil Micro-organisms ; Effect of Soil Solution, 730. New Russian Studies of Nitrogen-fixing Bacteria, 731. Researches in Agricultural Bacteriology carried out in Denmark during the Period 1904-1914, 843. Experiments on Humogen or Bacterised Peat, 846. Method of Sterilisation and Chloroforming of the Soil in the Study of the Properties of Telermozion, 900. Lucerne Inoculation Experiment, Hawkesbury Agricultural College (New South Wales) 1912-16, 1064. A Study of the Problem of Forage Production in Uruguay, dealing with the use of Artificial Inoculation in the Lucerne Fields, 1180. Investigations on the Microorganisms of Peat Soils, Waste and Cultivated, 1258.
- Bactris major*, 864.
- Bakbar, the Indian Rice Beer Ferment, 227.
- Balordone addominale, 74.
- Bamboo : Cultivation of the Bamboo as a Profitable Commercial Enterprise, 439. Colonial Plants Capable of Acclimatisation in Sicily, 499.
- Bananas : Potash in Banana Stalks and Skins, 737. Banana Growing in New South Wales, 1186.
- Baniti, 760.
- Baphia nitida*, 2.
- Barley : Value of Farm Products in the United States and their Prices at the Farm in 1914, 103. Yields in Italy, 267. Comparative Tests of 4 Varieties of Barley at Torestorp, Sweden, 746. Action of Ammoniacal Salts on the Growth of Barley, 970. Naked Barley from Cyprus, 1162.
- Barium in Tobacco and other Plants, 1171.
- Baths, arsenical, 313.
- Bawchi, 147.
- Baylahuen, 498.
- Bean : Inheritance of Habit in the Common Bean, 29. Value of Farm Products in the United States and their Prices at the Farm in 1914, 103. Inheritance of Length of Pod in Certain Crosses, 394. Description of the Bean Germ, 972. Edible Beans from Burmah, 1164.
- Bee keeping : Investigation into the Returns of Swiss Bee keeping in 1914, 104. Outdoor Wintering of Bees, 210. The Viscosity of Beeswax and the Substances used for its Adulteration, 682. Cold as the Cause of the Death of Bees in a Colony Wintering under good Conditions, 782. Encouragement of the Breeding of Small Livestock and Bee-keeping by the Prussian State Railway Administration, 991. The "Ideal" Crespi-Balbi Hive, 1200.
- Beets : Agricultural Desiccating Installations, 219. Production of Beet Residues, page 486. Studies of the Formation and Translocation of Carbohydrates in Plants, 505. Experiments on the Germination Capa-

city of Beet Seeds, 858. *See also* Sugar Beets.

Belgium: The International Trade in Feeding Stuffs, page 467.

elloto, 498.

engal Bean, 492.

erro 498.

erseeem, *see* Clover.

ertholleia nobilis, 864.

etel, 387.

ibliography, The International Trade in Feeding Stuffs, page 500

ignay, 760.

ilharzia Laematobia, 4.

lood: Content of Digestible Elements in Blood Meal, 881.

oldo, 498.

ombax Munguba, 864.

ombus an efficient Cross-pollinator of red clover, 41, 61.

ones: Bone meal, 881.

oron, The Influence on Plant Growth, 854.

Botany, Agricultural: New Observations on the Concretions in the Pulp of Pears, 275. Seeds and Plants Imported into United States, 388. Habitual Presence of a Microorganism in the Roots of Crucifers, 389. Variations in Mineral Composition of Sap, Leaves and Stems of the Wild Grape Vine and the Maple Tree, 390. The Effect of Heating Seeds upon the Development of the Plant: Experiments made in Russia with Wheat, 391. Hourly Transpiration on Clear Days as Determined by Cyclic Environmental Factors, 392. Carbohydrate Transformation in Sweet Potatoes, 393. The Bureau of Applied Botany attached to the Scientific Committee of the Russian Ministry of agriculture and its first 20 Years of Work, 613. Influence of Hydrogen Peroxide on Germination, 627. Growth of the Root System of *Medicago sativa*, 847. The Taxonomic Value and

Structure of the Peach Glands, 848.

The Root Nodules of *Ceanothus*

americana and of *Cycadaceae*, 849.

Successful Treatment with Insecti-

cides of Plants in Flower, 963. The

Application of Botanical Science

to Agriculture 1065. Comparative

Study of the Root Systems and

Leaf Areas of Corn and the Sor-

ghums, 1170. The Flora of the Bel-

gian Coast, 1266.

Brazil: The Cultivation of Yams, 39.

The Possible Utilisation of a Wild

Species of *Anacardium*, 65. Decree

Regulating Butter Manufacture and

Trade, 565. *Fourcroya gigantea*,

Brazil, 642. The Brazilian Pitanga

an excellent Fruit Tree, 761. Wild

Oil Plants of Para, 864. Gum-yield-

ing Plants, 985.

Brazilian Pitanga, 761.

Brea vegetal, 498.

Bread making: Food Value of Differ-

ent Types of Bread, 338. Natural

Wheat Bread, 679.

Bread Nut tree, 388.

Breeding of Live Stock: Investiga-

tions into the Returns of Swiss

Agriculture, 101. Average for the

United States of Prices paid to

Producers of Live Stock, 103. Ob-

servations on the Skulls of Hybrids

between Wild and Domestic Hors-

es and Cattle, 200. Researches on

the Transmission of Epilepsy, 201.

Herd Books of the Argentine Ru-

ral Society, 202. Control of Sex,

320. The Inheritance of Coat Colours

in Horses, 321. The Heredity of

Sex, 418. Cattle Breeding in India,

488. Experiments with Dogs in Con-

nection with the Mendelian Laws

of Heredity, 889. The Detection

of the Prepotency of Sires, 989.

A Sex-limited Colour in Ayrshire

Cattle, 990. Encouragement of

Breeding by the Prussian State Rail-

way Administration, 991. The Adap-

- tation of Different Breeds to the Live Stock Industry, in the United States, 992. Agriculture in Switzerland, 1158. Mendelism of Short Ears in Sheep, 1197.
- Bresk, 48.
- Brewing: Residues of Brewing, page 494.
- Bromus arvensis* L., *B. mollis*, *B.* spp. 295, 398.
- Building, Farm: Pits for Winter Gardening, 98. Small Circular Reservoirs in Reinforced Cement, 433. Effect of Temperature on the Strength of Concrete, 434. Hydraulic Fill Method Used to Throw a Temporary Dam across a Wide Stream, 676. A Dry Heat Sterilizer, 677. Inverted Siphons Replace Bridges where Canals Cross Roads, 791. Small Irrigation Canals Lined with Concrete to Prevent Seepage Water Loss, 792. New Method of Fire-proofing Wood, 902. Fencing Poles with Rot-proof Feet, 903. Device for Protecting Sucking-Pigs, 904. Portable Building, 1211. Method of Housing Stock in Pens without Divisions in Use in Ohio, U. S. A., 1311. See also Drainage, Hydraulics.
- Bulgaria: The International Trade in Feeding Stuffs, page 467.
- Bullet tree, 266.
- Butea frondosa*, 1082.
- Butter: Value of Farm Products in the United States and their Prices at the Farm in 1914, 103. Decree Regulating Butter Manufacture and Trade in Brazil, 565.
- CABBAGES, 103.
- Cacao: Production of Cacao, Liberia, 2. Manufacturing of Cacao at Peradeniya, Ceylon, 55. The Field and Forest Resources of British Guiana, 266. *Theobroma* spp., 864. In Portuguese Guinea, 956.
- Cajanus indicus*, 493, 973.
- Cajueiro, 65.
- Cake: Gossypol in Cotton Seed Meal, 82. Sesame Cake as a Feed for Milch Cows, 84. Linseed Cake and Hempseed Cake, 85. The International Trade in Feeding Stuffs, page 467. Cotton cake and Palm Kernel Cake, 1097.
- Calaba, 1157.
- Calcium Hypochlorite as a Seed Sterilizer, 162.
- Calliphora oceaniae*, 1295.
- Camel: *Deraiothoromema cameli*: A New Species of Filaria, from Lunjof, 1087.
- Camphor and Camphor Oil from Malaya, 49.
- Camwood, 2.
- Canada: Meteorology in Relation to Agriculture, page 177. Production and Commerce of Forage Plant Seeds, 163. Co-operative Poultry Marketing in Saskatchewan, 347. The International Trade in Feeding Stuffs, page 467. Grain Screening and Results of Feeding Experiments, 770. Historical Review of Canada's Timber Industry, page 1227. The Forest Trees of Canada, page 1234. The Horse-Breeding Industry in Saskatchewan, 1297.
- Canarium* sp., 49.
- Canavalia ensiformis*, 494.
- Caneol, 498.
- Canned Fruits Industry in California, 230.
- Canutillo, 498.
- Carapa guianensis* and *C. procera*, 266, 864.
- Caricillo, 498.
- Carrots: Comparative Experiments on the Growth of some Varieties of Carrot at the Scientific Agricultural Station of Flahult, Sweden, 984.
- Carthamus tinctorius*, 1082.
- Caryocar tormentosum*, 266.

Cassia occidentalis and *Cassia* spp., 147, 148.

Castor oil tree in Italy, 757.

Catmon, 760.

Cattle: Studies on Bovine Piroplasmiasis in Algeria, 75. A Disease in Cows Due to the "Flesh Fly", *Sarcophaga magnifica*, 76. Experiments in Feeding Milch Cows with Potatoes from Silo, 83. Sesame Cake as a Feed for Milk Cows, 84. The Effect of Feeding on the Composition of Milk and Butter: Linseed Cake and Hempseed Cake, 85. Experiments on Feeding Cows and Calves with *Andropogon Sorghum*, 86. Value of Farm Products in the United States and their Prices at the Farm in 1914, 103. Observations on the Skulls of Hybrids, between Wild and Domestic Cattle, 200. Dairy Breed Statistics in the United States, 203. Cow Testing and its Advantages, 322. The Value of Barley for Cows Fed Alfalfa, 323. A New Type of Cattle for Alaska, 419. Dairying in Uruguay, page 629. Raising the Dairy Calf, 534. Effect of Small Quantities of Phosphates Fed to Cows on the Quantity and Quality of the Milk Produced, 535. Variations in Interval Between the Two Milking-Times and their Influence on the Quantity and Quality of Milk, 536. Maize Silage and Alfalfa Hay for Beef Production, 537. In Morocco, 609. Requirements for Advanced Registry of Cattle Breeds in the United States, 606. Regulations adopted by the Argentine Rural Society for Registering Milk Records of Dairy Cows, 607. Osmotic Equilibrium between Blood and Milk in the Cow, 769. The Miranda Breed of Cattle (Braganza, Portugal), 772. Feeding Cows with the Subcutaneous Matter of Skins intended for Tanning, 773. Skim

Milk with an Addition of Sweetened Flour for Rearing Sucking Calves, 774. Experiments to ascertain whether the Ability to produce Milk Fat is transmitted by the Dam or the Sire, 775. List of Champion Cows of the 5 Principal Dairy Breeds of the United States in 1915, 776. The Guernsey Breed of Cattle in Italy, 777. Relation between the Quantity of Milk Formed and that obtained in Milking, 884. Effect of Water in the Ration on the Composition of Milk, 885. The Value of Maize Silage, Fed in Big Rations, in the Feeding Economy of Cattle, 886. Scale of Points adopted by the "American Jersey Cattle Club", 887. Progress of Guernsey Cattle in the United States according to Particulars of the "American Guernsey Cattle Club", 888. A Sex-limited Colour in Ayrshire Cattle, 990. Cattle in the United States, 992. Statistical Data as to increased Weight and Food Consumption of the Jersey and Holstein-Frisian Breeds from Birth to first Calving, 994. Progress of the Holstein Breed in the United States, 995. The Portuguese Cattle Breeds, Barrosa and Maronesa, 996. Origin of the Brazilian Breed of Cattle "Caracu", 1093. The Ration and Age of First Calving as Factors Influencing the Growth and Dairy Qualities of Cows, 1094. The Cost of Food in the Production of Milk, 1095. Feeding Trials of Dairy Cows in Denmark, 1096. Comparative Experiments on the Feeding of Cows with Cotton Cake and Palm Kernel Cake, 1097. Studies on the Hygienic Production of Milk: Importance and Control of the Microflora of the Udder in the Selection of Dairy Cows, 1098. The Dairy Side of the Ayrshire, 1100. Farm Management Practice

- of Chester County, Pa., U. S. A., 1114. Score for Holstein-Friesian Bulls and Cows adopted by the Holstein-Friesian Association of America, 1193. Score Card for Simmenthal Cattle, 1194. Establishment of a Herd-Book for the Caracn Breed of Brazil, 1195. Dairying on the River Murray Areas, 1196. Gestation and Sterility in Cows, 1298. The Advantages of Winter Calving, 1299.
- Caucha, 498.
- Cayenne cherry, 761.
- Ceanothus americanus*, 849.
- Cedar, White, 266.
- Cedar, Red, 266.
- Ceiba pentandra*, 864.
- Cendrela Toonua*, 1082.
- Centrosema Plumieri*, 148.
- Centrosema pubescens*, 493.
- Cereal crops: "Iburn" and "Fundi", two Cereals of Upper Guinea, 37. Comparative Yields of Cereals in Italy, 267. Plants Indigenous to Chile which are Cultivated, Capable of Cultivation, or Useful, 498. The Selection of Cereals in Italy, page 777. In Morocco, 609. Grain Screenings and Results of Feeding Experiments in Canada, 770. Cost of Production of the Principal Cereals in European Russia, 906. Cereals Crops in Portuguese Guinea, 956. A new Method of Determining the Impurity of Cereal Grains, 968. The Agricultural Resources of Indo-China, 1157. Cereal Selection in Croatia, Austria-Hungary, 1172. See also Barley; Maize. Oats, Wheat, etc.
- Chachacoma, 498.
- Chaff-Cutter with Curve Blade and Plate for Packing the Straw, 429.
- Chalcis calliphora*, 1295.
- Chamaecrista diphylla*, 193.
- Chamaecyparis obtusa*, 656.
- Chamaerops humilis*, 609.
- Cheese: Apparatus for the Cheese Curing Room, 430. The Chromogenic Micro-organisms of Cheese and their Presence in the Italian "Robbiola", 453. Importation of the Principal Dairy Products in 1911, Uruguay, page 633. The Cheese Industry in Portugal, 800. The Measures to be adopted for Preventing Unfair Competition in the Cheese Trade, 801. Manufacture and Composition of Bulgarian Cheese, 1024. The Supply of Rennet for Cheese Making in Italy, 1220.
- Chec tree, 388.
- Chemistry and Plant Physiology: Occurrence of Haematoid Compounds of Iron in Plants, 18. Localisation of Acids and Sugars in Fleshy Fruits, 19. Tyrosinase of the Potato and Sugar Beet, 20. Chemical Composition of the Kernels of the Cherry-Laurel, 21. Recent Researches on the Chemical and Histological Characters of Radishes Cultivated in the Presence of Sugars, 22. Index of Foliar Transpiring Power as an Indicator of Permanent Wilting in Plants, 23. Protecting Pollinated Blossoms, 24. Illustration of Inbreeding, 25. Influence of Pollination on the Production of Red Clover Seed, 26. Experiments on the Pollination of Fruit Trees, 27. Pollination of Fruit Trees: Observations and Experiments from 1904 to 1912, 61. Contribution to the Physiology and Technique of the Forcing of Woody Plants, 62. A Relative Score Method of Recording Comparisons of Plant condition and other Unmeasured Characters, 139. New Method Adopted in Russia for Studying the Root System of Cultivated Plants, 151. Vitality of Seeds Passed by Cattle, 152. Case of Albinism Due to Cold and Occurring in the Leaves of Uruguay

Oats, 153. The Question of the Toxicity of Distilled Water, 154. Water as a Factor of Production in Leguminosae, 155. Contributions to the Physiology of Stomata in *Saccharum officinarum*. Observations on Transpiration in Sugarcane, 156. The Influence of Temperature on Respiration in Fruit, 157. Some Effects of Ethylene on the Metabolism of Plants, 158. Ash Composition of Upland Rice at Various Stages of Growth, 276. Method of Prophesying the Life Duration of Seeds, 277. Effect of Green Manures on the Germination of Various Seeds, 278. Exchange of Ions between the Roots of *Lupinus albus* and Culture Solutions Containing one Nutrient Salt, 279. Three-Salt Nutrient Solution for Plants, 280. Secretion, by the Roots, of Substances Toxic to the Plant, 281. Respiration Experiments with Sweet Potatoes, 282. Relation of Root Growth and Development to the Temperature and Aeration of the Soil, 283. Study of the Relation of Transpiration to the Size and Number of Stomata, 284. Translocation of Mineral Constituents of Seeds and Tubers of Certain Plants during Growth, 285. The Inoculation of the Chief Leguminosae with Six Different Species of Nodule-forming Bacteria in Kentucky, U. S. A., 501. The Presence of Copper in Tomatoes and Tomato Preserves, 502. The Part Played by Mineral Elements in Plant Life, 503. The Action of Superphosphates on the Root System of Plants, 504. Studies of the Formation and Translocation of Carbohydrates in Plants, 505. Manganese in Wheat, 625. Investigations into Vegetable Oils: Results and Problems, 626. Influence of Hydrogen Peroxide on Germina-

tion, 627. Fluorine in the Vegetable Kingdom, 628. Changes in the Specific Gravity and in the Starch and Dry Matter Content of Potatoes doing Storage, 743. Rapid Action of Saline Solutions on Living Plants: Reversible Displacement of a Part of the Basic Substances contained in the Plant, 744. The Relations between the Presence of Magnesium in Leaves and the Function of Assimilation, 745. The Enzymes Zymase and Carboxylase in the Storage Organs of the Potato and Sugar Beet, 850. Investigations into the Part played by the Amylase in Potato Tubers, 851. Amount of Humic Substance in Decomposing Leaves, 852. On the Nutrition of Green Plants by means of Organic Substances, 853. The Influence of Boron on Plant Growth, 854. The Influence of Strontium Salts on Wheat, 855. Experiments in connection with the Assimilation of Potassium and Sodium Ions by the Sugar Beet, 856. Osmotic Pressure of Soil Moisture and Glassiness of the Grain of Bielotourka Wheat, 964. Senile Changes in the Leaves of *Vitis vulpina* and certain other Plants, 956. A Biochemical Study of Nitrogen in Certain Legumes, 1066. The effect of heavy Dressings of Mineral Salts on the Development and Structure of Plants, 1067. Nitrogen Requirements of the Olive Tree, 1068. Barium in Tobacco and Other Plants, 1171. The Optimum Temperature of a Diastase is Independent of the Concentration of Substrate and Enzyme, 1268. On the Reduction of Nitrate by Plants with Evolution of Oxygen, 1269. The Assimilation of Iron by Plants, 1270. Influence of Calcium and Magnesium Compounds on Plant Growth, 1271. *Chenopodium quinoa*, 59.

- Chequen, 498.
 Cherry Laurel, 21.
 Cherry-tree : Frost Protection for Fruit and Vegetables in the United States, 5. Pollination of Fruit Trees, 61. In United States, 308.
 Chicha, 498.
 Chicory, 395.
 Chile : The International Trade in Feeding Stuffs, page 467. Plants Indigenous to Chile which are Cultivated, Capable of Cultivation or Useful, 498. Agricultural Education in Chile. The Agronomic Institute of Santiago, 957.
 China : Hats Made of Chinese Palm Leaf, 799.
 Chinese Hawthorn, 388.
Chloris Gayana, 499.
 Ciambo, 864.
 Ciders : Methods of Encouraging Cider Apples to Bear Every Year, 63. Methods of Detecting the Admixture of Cider to Wine, 1016. The Use of Cider Apples and Cane Sugar in a Beet Sugar Distillery, 1117. On the Composition of Cider Brandy, 1320.
Cinnamomum Camphora, 49.
 Citronella Oil as a Preventive of Mosquito Bites, 382. Notes on the Extraction of Citronella Oil, 1287.
 Citrus Fruits : Intensive Cultivation of Pineapples with Citrus in Queensland, 304. Plant Breeding in Cuba, 396. See also Lime and Orange.
Cladonia Rangiferina, 881.
 Climate in South Africa, page 1. In the Central Provinces, India, 147.
Clitoria cajanifolia, 148.
Clostridium Pasteurianum, 731.
 Clover : Red Clover Seed Production, Pollination Studies, 41. Cultural Experiments Conducted in Denmark with Different Mixtures of the Seed of Forage Plants, 168. Cultural Experiments in Germany with *Trifolium pratense* from 18 Different Localities, 169. Comparative Researches on the Dimensions of the Seeds of Clover and Dodder, 290. Seeds and Plants imported into United States, 388.
 Cochayuyo, 498.
 Coconut : Development of Agricultural and Forest Resources of Liberia, 2. A promising Coconut clearing in Malaya, 404. *Cocos* spp. 864.
Coffea canephora, 53.
 Coffee : Air-Layering of the Coffee Plant, 53. In British Guiana, 260. In India, 488. Coffee-tree Grafting in Java, 649. Uganda coffee, 841. Growing in Portuguese Guinea, 956. Coffee in Java, 1284.
 Cokerite, 841.
 Cold Storage : Carload Freight and Refrigeration of Cantaloupe, 236. Conditions under which the Cold Storage Industry will Render the greatest Services to the Vine Growing Industry in Tunisia, 1015.
 Colihue, 498.
Colocasia, 396.
 Columbia : *Chenopodium quinoa* in Columbia, 59. Legislative measures adopted by the Republic for Agricultural and Livestock Development, 608. Creation of a School of Silkworm Rearing in the Republic, 721. Reorganisation of Agricultural Education, 958.
Commelina communis, 1171.
 Conchita peluda, 493.
Conopharyngia elegans, 48.
 Copa, 498.
Copaifera spp., 266, 864.
 Copper : The Presence of Copper in Tomatoes and Tomato-Preserves, 502.
 Copra : The International Trade, page 432. Queensland-grown Copra, 645.
Coregonus spp., 93.
 Cork tree : In Morocco, 609.
 Cotton : Brazilian Cottons, 43. Value

- of Farm Products in the United States and their Prices at the Farm in 1914, 103. American Cotton in the Punjab, 171. Growing in British Guiana, 266. Custom Ginning as a Factor in Cotton Seed Deterioration, 297. Production of Cottonseed Cakes and Meal in the United States, *page* 475. Seeds and Plants imported into United States, 388. The Cultivation of Cotton in Greece, 401. Cotton Hybridisation at the Botanic Gardens, British Guiana, 402. Steps Taken to Preserve *Kokia Roñi*, a Wild Relative of the Cultivated Cotton Plant in Hawaii, 403. Growing in India, 488. *Gossypium Paolii* n. sp. and *G. benadiense* n. sp. New Varieties of Indigenous Cotton in Italian Somaliland, 516. Arborescent Cotton Plants, 517. The Introduction of the Cultivation of Egyptian Cotton into the South West of the United States, 518. Growing in Morocco, 609. The Cotton Plant in the Russian Empire, 641. Machine for Gathering Cotton Fruits without Injury to the Plant, 899. Experiments in connection with Spinning Cotton after Fumigation with Hydrocyanic Acid, 912. Analysis of Cotton at the Chief Stages of its Development, 1079. Disadvantage of Selling Cotton in the Seed. 1122.
- over crops *see* Manure Green.
- ow-pea, *see* *Vigna Catjang*.
- ows, *see* Cattle.
- rah oil, 266.
- rahwood, 266.
- rataegus pinnatifida*, 388.
- rotalaria*, spp., 147, 148, 387.
- ryptomeria japonica*, 656.
- pha: Plant Breeding, 396. The Organization of the Cuban Agricultural Experiment Station, 722.
- drania tricuspidata*, 388.
- Culen, 498.
- Cumarū, 864.
- Cunao, 1157.
- Cuprassū, 864.
- Curcuma longa*, 1082.
- Cyamopsis psoralioides*, 387.
- Cyanamide, *see* Manure Nitrogenous and Manures.
- Cymbopetalum penduliflorum*, 388.
- Cymbopogon Nardus* var. *vellidus*, 1162.
- Cynosurum cristatus*, 398.
- Cysticercus cellulosae*, 314.
- Cytisus as Forage, 983.
- Cytisus spinescens*, 640.
- DACROIDES HEXANDRA, 48.
- Dactylis glomerata*, 398.
- Daincha, 147.
- Dairying: Experiments in Feeding Milch Cows with Potatoes from Silo, 83. Sesame Cake as a Feed for Milch Cows, 84. The Effect of Feeding on the Composition of Milk and Butter, 85. One-Crop Farming Versus Dairying in Wisconsin, 100. Investigations into the Returns of Swiss Agriculture during the Year 1913-1914, 101. Rational Preparation of Rennet from the Stomach of the Calf, Sheep and Goat, 233. Cow Testing and its Advantages, 322. The Value of Barley for Cows fed Alfalfa, 323. Relation of Investment to Farm Profits in the Dairy Farms of Wisconsin, 335. The Cost of Milk Production in the Counties of Kent and Surrey, 337. The Practical Balance for a Successful Dairy Farm in the United States, 441. Profits and Loss in the Dairy Business of Chemung County, New York, United States, 442. Pasteurization of Milk in Modern Practice, 449. Dairying in Uruguay, *page* 629. Variations in Interval Between the two Milking-times and their Influence on the Quantity and Quality

- of Milk, 536. Tests on Milking Ewes in Hungary for Yield of Milk, 539. Requirements for Advanced Registry of Cattle Breeds in the United States, 666. Regulations adopted by the Argentine Rural Society for Registering Milk Records of Dairy Cows, 667. Chemical Comparison between two Fermented Milk Products: the "Luben raieb" of Egypt and the "Miciuratu" of Sardinia, 680. Experiments to ascertain whether the Ability to produce Milk Fat is transmitted by the Dam or the Sire, 775. Relation between the Quantity of Milk formed and that obtained in Milking, 884. Effect of Water in the Ration on the Composition of Milk, 885. Milk Can Emptying Machine, 900. Cost of Milk Production in the Country of Jefferson State of New York, United States of America, 909. Monograph on a Small Dairy Farm in Illinois, 910. Factors Affecting the Fat Content of Whole and Skim Milk, 913. Metallic Taste in Dairy Industry Products, 914. Control of the Sale of Skim Milk, 920. Automatic Watering of Dairy Cows, 1009. The Dairy Industry of Argentina, and Plans for its Future Development, 1021. Influence of Mechanical Milking with the "Omega" Milker on the Bacteriological Composition of Milk, 1022. Feeding Trials of Dairy Cows in Denmark, 1090. Studies on the Hygienic Production of Milk, 1098. The East Anglian Milk Recording Society, 1099. Simple Steam Sterilizer for Farm Dairy Utensils, 1113. Dairying on the River Murray Areas, 1160. New Dairy Industry Legislation in New South Wales, Australia, 1218. See also: Milk, Butter, Cheese, etc.
- Dalli: 266.
- Dalmia extensa*, 45.
- Dapog, Method of Sowing and Transplanting Rice, 749.
- Date Palm: Botanical Characters of the Leaves of the Date Palm Used in Distinguishing Varieties, 66. Seeds and Plants imported into United States, 388. In Morocco, 609. The Date Palms of Egypt and the Sudan, 873.
- Dead Borneo, 48.
- Denmark: Cultural Experiments Conducted in Denmark with Different Mixtures of the Seeds of Forage Plants, 168. Experiments Made in Denmark on the Seed Time of Sugar Beets, 299. The International Trade in Feeding Stuffs, page 467. Feeding Trials of Dairy Cows, 1090. Statistical Researches on the Chief Factors Which Influence Farm Profit, 1215.
- Deraiophoroniema cameli*, a New Species of *Filaria* from the Camel's Lung, 1087.
- Dermatocentor parumpertus marginatus*, 187.
- Desmodium*, 148, 493.
- Development of Agriculture in Different Countries: Field and Forest Resources of British Guiana, 266. Agriculture in Brittany (France), 1057. Agriculture in India, 188. The Agricultural Resources of Indo-China, 1157. Agricultural Development in the Roman Campagna, Italy, 3. Development of Agricultural and Forest Resources of Liberia, 2. Agriculture and Livestock in the Spanish Gharb (Morocco), 609. The Agricultural Products of Portuguese Guinea, 950. Agriculture and its Allied Industries in Rumania, 1253. The Present State of Agriculture in Sweden, page 921. Agriculture in Switzerland, 1158.
- Dewmeter, The "Erebia", 384.
- Dhak, 1082.

- Dholl, 973.
Digitalia iburna and *D. exilis*, 37.
Dillenia philippinensis, 760.
Dimorphandra Mora, 266.
Dioscorea alata and *D. Batatas*, 39, 396.
Diospyros virginiana ("Persimmon"), 388, 760, 872.
Diplorynchus mossambicensis, 48.
Dipping Tanks: see Hygiene of Live Stock.
Dipleryx odorata, 266, 864.
Distillery: Distillery Residue, page 494.
Colour Changes due to Microorganism in the Distillates of Plants and Flowers, 448. The Determination of the Iodine Index of Alcoholic Liquids, 796. A Palm Fruit Used for Flavoured Brandy, 911. The Use of Cider Apples and Cane Sugar in a Beet Sugar Distillery, 4117.
Dog: The Chalcid *Hunterellus Hookeri* Parasitic on the Tick *Rhipicephalus sanguineus*, 187. Experiments with Dogs in connection with the Mendelian Laws of Heredity, 883.
Dolichus uniflorus, 147.
Dourine, 72.
Drainage: Petrol Tractor for Drain Digging, 1112.
Drying: Agricultural Dessicating Installations, 219. Portable "Vasino" Cereal Drier, 898. The Conversion of Fruits and Vegetables into Dried Products, 1019. The Dessication of Potatoes in Germany, 1216.
Ducks: Plague attacking Wild Ducks at Milan, 533.
Durellaria utilis, 498.
Dye Plants, see Tanning and Colouring matters.
Dyera costulata, 48.
EDUCATION IN AGRICULTURE AND FORESTRY: The first 50 years of the Moscow Higher School of Agriculture (1865-1915), 383. Creation of a School of Silkworm Rearing in the Republic of Colombia, 721. Agricultural Education in Chile, 957. The Agronomic Institute of Santiago, 958. Reorganisation of Agricultural Education in Columbia, 958. Agricultural Instruction by Correspondence in France, 1255.
Egg Plant in Morocco, 609.
Eggs: Value of Farm Products in the United States and their Prices at the Farm in 1914, 103. Measurement of the Winter Cycle in the Egg Production of Domestic Fowl, 208. Bacteria in Fresh and Preserved Eggs, 344. Laying Competition at Burnley, 425. The Sale of Eggs and Poultry in Massachusetts under Guarantee, 458. Experiments in Preserving Broken Eggs, 918. Researches into the Content of Bacteria and Catalase in Hen's Eggs, 1025. New and Quick Method of Determining the Age of Eggs, 1223. A Study of the Preparation of Frozen and Dried Eggs, 1224. Sterilized Fresh Eggs, 1324.
Egypt: Investigation on *Bilharzia haematobia*, 4. Sericulture, 212. The International Trade in Feeding Stuffs, page 467.
Electricity: Experiments in the Application of Electricity to Plant Production, in England, 1260.
Élémi and Dry Élémi, 48.
Elevators: Chain Pump or Conveyor, 431. Farmer's Elevators in Minnesota, United States, 1026.
Elois: In Siberia, 2. Exportation of Palm Kernels, page 484.
Emphysarcol, 659.
Encouragement of Breeding, see Breeding.
Engineering, Farm, see Machinery, Farm Buildings, etc.
Ensilage: Laboratory Research in Connection with the Grain Elevators of the Russian State Bank, 114.

- Ensilage of Potatoes*, Experiments in Germany, 115. The Lansing Silo, 333. Extensive Use of Silos in Kansas, U. S. A., 435. Silage from Green Forage in Java, 1279.
- Enterolobium ellipticum*, 985.
- Eperna* spp., 266.
- Epicampe macroura*, 168.
- Eragrostis superba*, 388.
- Eriodendron aenfractuosum*, 864.
- Erisma calcaratum*, 864.
- Esparto of America, 108.
- Eucalyptus: Value of Eucalyptus Wood as Fuel, 657. The Eucalyptus in Algeria, 876.
- Euryphila cordifolia*, 498.
- Eugenia curranii*, 760.
- Euphorbia Timcalli*, *E. cuneata* and *E. spp.*, 15.
- Evergreen Oak, 388.
- Experimental and Analytical Work: Relative Score Method of Recording Comparisons of Plant Condition and other Unmeasured Characters, 139. Scientific Research of Central Research Station at Pusa, 488. The Selection of Cereals in Italy, page 777. The Bureau of Applied Botany attached to the Scientific Committee of the Russian Ministry of Agriculture and its first 20 Years of Work (1894-1914), 613. The Organisation of the Cuban Agricultural Experiment Station, 722. Recent Investigations at the Imperial Institute in reference to Maximiliana Fruits, Tobacco, Coffee, Medicinal and Poisonous Plants and Silk, 841. The Royal Institute for Agricultural Experiments, Tripoli, 1161. Recent Investigations at the Imperial Institute, London: Whales' Bones from the Falkland Islands; Naked Barley from Cyprus; Edible Beans from Burmah; Paper-Making Materials from South Africa; African Silk, 1162.
- FALLOWING, Improved Summer, 386.
- Falsa cebadilla, 296.
- Fats: On a Biochemical Reaction of Rancid Fats, 111. The Utilization of the Residues of Oil Extraction from Olives, 445. Experiments Carried out in the United States Upon the Digestibility of Some Animal Fats, 561. Refraction Constants of Various Vegetable Fats and Oils, 1118. The Abnormal Composition of Fat in a Pig, Fed on Maize, 1221. See also Oilcrops, Wax, etc.
- Feeds: Gossypol the Toxic Substance in Cotton Seed Meal, 82. Experiments in Germany on Feeding Lambs with Pine Needles, 87. Aftermath Hay Meal, 88. Skim Milk Supplemented by Cream Substitutes of Varying Protein Content, 89. Composition and Food Value of the Seeds of *Galium*, 198. Calculation of the Percentage of Molasses in Molassine Feeds, 199. Microscopic Analysis of Meat and Fish Meals, 343. The International Trade in Feeding Stuffs, page 467. Maize Silage and Alfalfa, 557. Ground Wheat versus Whole Wheat for Fattening Pigs, 540. On the Use of Fern-root (*Pteris aquilina*) in German Pig-feeding Experiments, 541. Trade in Commercial Foods for Livestock in Uruguay, 664. Grain Screenings and Results of Feeding Experiments in Canada, 770. Skim Milk with an Addition of Sweetened Flour for Rearing Sucking Calves, 774. Experiments in Pig Feeding with Potato Meal, 778. Experiments in Feeding Pigs with Straw Meal and Straw rendered Soluble by Caustic Soda, 779. Value of Lucerne and other Green Forage in Pig Feeding, 780. The Importance of Silage in the Economics of Livestock Feeding on Farms

in East Anglia, 880. The Value of Maize Silage Fed in Big Rations in the Feeding Economy of Cattle, 886. Pig Breeding and Intensive Maize and Soya Pasturage, in the United States, 889. Specific Effects of Different Rations on the Growth of Pigs; Experiments at the Ohio Agricultural Experiment Station, United States, 988. Wheat as a Food for Fattening Pigs, Experiments in Missouri, United States, 999. Fish Meal as Food for Pigs, 1301.

Feeding of Live Stock: Character of the Water-soluble Nitrogen of Some Common Feeding stuffs, 81. Gossypol, the Toxic Substance in Cotton Seed Meal, 82. Experiments in Feeding Milk Cows with Potatoes from Silo, 83. Sesame Cake as a Feed for Milch Cows, 84. Effect of Feeding on the Composition of Milk and Butter: Linseed Cake and Hempseed Cake, 85. Feeding Experiments with Sudan Grass on Cows and Calves, 86. Experiments in Germany on Feeding Lambs with Pine Needles, 87. Pig Feeding Experiments with Aftermath Hay Meal, 88. Feeding Experiments on Young Pigs with Skim Milk Supplemented by Cream Substitutes of Varying Protein Content, 89. Value of the Starch Equivalent System in Modern Feeding Practice, 194. Essential Factors in the Diet during Growth, 195. Acidosis (Excess of Acids) in Omnivora and Herbivora and its Relation to Protein Storage, 196. Chemical Change in the Intestinal Content from the Beginning of the Colon to the Rectum, 197. Value of Barley for Cows Fed Alfalfa; Experiments in California, 323. Single Food Diet and Nutritional Deficiency, 415. Formation of Albumen

in the Animal Body at the Expense of Nitrogenous Non-Albuminous Substances, 416. Experiments with Ammoniacal Salts in the Feeding of Ruminants, 417. Corn Silage and Alfalfa Hay for Beef Production, 537. Investigations into Nutritional Deficiency, 663. The Importance of Silage in the Economics of Livestock Feeding, on Farms in East Anglia, 880. Experiments on the Digestibility of Various Little Used Cattle Foods, 881. Nutritive Value and Digestibility of Wood; Feeding Experiments in Germany, 882. Metabolism of the Organic and Inorganic Compounds of Phosphorus, 1088. The Influence of the Nature of the Diet on the Retention of Protein, 1089. The Influence of Phosphates on the Feeding of Cattle, 1090. Influence of Feeding with Milk Rich in Carbohydrates (Diafarinised) and Milk Rich in Fat (Emulsion Milk) of Varying Protein Content, on the Composition of Young Pigs, 1189. The Influence of Feeding Damaged Maize on the Composition of Pig Fat, 1190. Investigations on the Poisoning of Poultry by Corn Cockle (*Agrostemma Githago*), in Hungary, 1191. Experiments on the Feeding of Draught Horses made in Sweden from 1908 to 1915, 1192. A New Unit for the Estimation of Food Values, 1296. See also Forage Crops.

Fermented Milks, 454.

Festuca ovina, 398.

Fiber zibethicus, 215.

Fibre crops: *Urena lobata* a Wild Malvacea of Madagascar, 172. The Fibre Industry of Mauritius, 229. Fibre Crops in India, 488. Plants Indigenous to Chile which are cultivated, capable of Cultivation or Useful, 498. Cultivation of Four-

Crocyda gigantea in the State of Rio de Janeiro, Brazil, 642. Piassava Industry of British West Africa, 754. Industrial Retting of Textile Plants by Microbiological Action, page 1067. The Agricultural Products of Portuguese Guinea, 956. The Agricultural Resources of Indo-China, 1157. See also Hemp, Sisal, etc.

Ficus ulmifolia, 388.

Ficus utilis, 48.

Fires: Dust Explosions and Fires in Grain Separators in the Pacific Northwest, 1208.

Fish Culture: Experiments on the Toxic Action of Acids and Alkalis upon Fish, 92. Breeding of White Fish (*Coregonus* spp.) in Switzerland, 93. Fishing and Fish Culture in Hungary, page 180. Canadian Musk Rat (*Fiber zibethicus*) Injurious to Fish in Austria, 215. Hydrobiological Station at Davos, 329. Fish Culture as a Means of Using Alkaline Land in Hungary, 330. Food of the Rainbow Trout (*Salmo irideus* Gibb.) in Alpine Lakes, 428. Recent Research on the Ascent of Rivers by Salmon, 543. Researches on the Toxic Effect of Sulphuric Acid on Pond-fish, 544. Damage caused to Fish-culture in Hungary by the Residual Waters from Starch Manufactures, 545. Fish-culture and the Biological Purification of Sewer Water at Charkow (South Russia), 546. A New Skin Disease in Carp in Germany, 783. Researches on the Digestibility of Different Foods used for Rearing Young Fish, 892. Fish Breeding in Switzerland, 893. The Migration of Fish of the Genus *Mugil*, in the Lake of Thau, 1002. Investigation on the Number of Eggs Produced by Certain Fish, 1108. The Improvement of Carp and Pikeperch

Fisheries in Lake Balaton, Hungary, 1109. The Distribution of Fish and Fish Eggs in the United States during the Fiscal Year Ending 1915, 1304.

Flax: Linseed Cake and Hempseed Cake for Feeding, 85. Value of Farm Products in the United States and their Prices at the Farm 103. The International Trade in Feeding Stuffs, page 474. Chemical Determination of the Fibre yield of Flax for the Purpose of Studying the Different Cultivation Factors on Such Yield, 753. *Pectinobacter amylophilum*, a New Organism which may be of Practical Importance in Flax Retting, 797. Industrial Retting of Textile Plants, page 1067.

Flor de la perdiz, 498.

Florida Velvet Bean, 493.

Flour, see Milling, Bread Making.

Fluorine in the Vegetable Kingdom, 628.

Fonio, 37.

Forage crops: Value of Sudan Grass as a Forage Crop, 42. Averages for the United States of Prices paid to Producers, 103. Production and Commerce of Forage Plant Seeds in Canada, 163. Scotland's Upland Grazings, 167. Cultural Experiments with Different Mixtures of the Seeds of Forage Plants, 168. Native Pasture Grasses of the United States, 170. Comparative Researches on the Dimensions of the Seeds of Clover and Dodder, 290. Cultural Experiments with *Bromus arvensis* at Svalöf, Sweden, 295. *Panicum sanguinale* or False Cebadilla, a Wild Forage Plant in Paraguay, 296. Seeds and Plants imported into United States, 388. Experiments on the Germination of Seeds of Gramineae, 398. Breeding of Drought Resistant Millet and sorgho in the Great Plains Region of the

- United States, 514. *Cytisus spinescens* as Winter Forage, 640. Moisture Content and Shrinkage of Forage and the Relation of these Factors to the Accuracy of Experimental Data, 976. Investigations into Factors affecting the Handling of Wheat Hay, including a study of its Digestibility, 977. *Paspalum* spp., Forage Plant in Argentina, 978. Natal Grass (*Tricholaena rosea*), a Forage Plant for Hot Countries, 979. Cultivation value of *Medicago sativa* var. *falcata* and *Medicago orbicularis*, 980, 981. The Green Pea as a Forage Plant in North America, 982. *Cytisus* as Forage, 983. The Artichoke as a Forage Plant, 1078. A Study of the Problem of Forage Production in Uruguay, 1180. The Forage Question in Aragon, Spain, 1181.
- Forestry: The Growth of the Black Poplar in Tuscany, Italy, 70. Mammalian Experiments in a Woodland Nursery in Austria, 186. The Field and Forest Resources of British Guiana, 266. Plants indigenous to Chile which are Cultivated, Capable of Cultivation, or Useful, 498. In Morocco, 609. Composition of Fallen Leaves of Forest Trees and their Quantities, 653. Investigations of Tree Seeds in Relation to the Place of Origin of the Parent Trees and their Descent and Experiments on the Preservation of the Principal Forest Tree Seeds, 654. The Genus *Juniperus* and Its Commercial Importance, 655. The proper Season for Application of Fertilisers to *Cryptomeria japonica* and *Chamaecyparis obtusa* and the Efficacy of the Former, 656. Value of Eucalyptus Wood as Fuel: Experiments in the State of San Paulo, Brazil, 657. Commercial Development of Forests in British India, 658. Forestry in Sweden, page 925. Program for the Triennial Period 1913-17 arranged by the Swedish State Institute of Experimental Forestry, 765. Hot Water Treatment of Tree Seeds used in Reafforestation and of Poor Germinating Capacity, 875. Historical Review of Canada's Timber Industry, page 1227. The Forest trees of Canada, page 1234. Forestry of Portuguese Guinea, 956. Relations between Forest Valuation and Management, 986. Forest Products of Indochina, 1157. Forests in Switzerland, 1158. See also Pine, Oaks, Juniper, Larches, Aca-cia, etc.
- Fourcroya gigantea*, 642.
- Fowls, see Poultry.
- Fragaria chilensis*, 498.
- France: Hybrid Self-Bearer Vines in France in 1915, 185. The International Trade in Feeding Stuffs, page 467. Experiments on Sugar-Beet Growing, 407. Observations on the Cultivation of Direct Bearers in Savoy, 411. Spring Wheat Sowing in France: Manitoba Wheats and Rieti Wheat, 510. Official Trials of Tillage Machines in France, 670, 671. Hybrid Direct Bearers in the Regions of Côtes-du-Rhône, 762. Agriculture in Brittany, 1057. Osier Culture in France, 1080. The Harvesting and Cultivation of Medicinal Plants in France, 1083. Cultivation and Marketing of Flowers and Early Produce, 1184. Motor Ploughing in France, 1206. Agricultural Instruction by Correspondence, 1255.
- Fraud and Falsification, see Adulteration and Fraud.
- Frost: Frost Protection for Fruit and Vegetables in the United States, 5. A Case of Albinism Due to Cold and Occurring in the Leaves of Uruguay Oats, 153. Buried Peach

- Orchards, 179. Self-lighting Attachment for Smudge Pots, 218.
- Fruit Growing: Frost Protection for Fruit and Vegetables, 5. The Localisation of Acids and Sugars in Fleshy Fruits, 19. Pollination of Fruit Trees, 61. Contribution to the Physiology and Technique of the Forcing of Woody Plants, 62. The Possible Utilization of a Wild Species of *Anacardium* in Brazil, 65. The Influence of Temperature on Respiration in Fruit, 157. Ringing Fruit Trees, 177. The Canned Fruits Industry in California, 230. Effect of Various Dressings on Pruning Wounds of Fruit Trees, 306. Report on New or Noteworthy Fruits by the New York Agricultural Experiment Station, Geneva, N. Y. United States, 308. Regulations for the Commerce of Fruit in Cases, in Queensland, 346. Fruit Growing in India, 488. Plants indigenous to Chile, 498. Colonial Plants of Economic Importance cultivated in the Royal Colonial Garden of Palermo, Italy, 499. The Acclimatisation of Plants and their Adaptation to the Soil by Grafting, 524. The Blooming Season, Ripening Dates and Length of Season for Fruits, 525. Fruit Trees in Morocco, 609. Bridge Grafting of Fruit Trees, 758. The Fruiting of Trees in Consecutive Seasons, 759. New or Noteworthy Tropical Fruits in the Philippines, 760. The Brazilian Pitanga (*Eugenia uniflora* L.), an Excellent Fruit, 761. In Portuguese Guinea, 956. In Indo-China, 1157. Mountain Fruit Growing in Switzerland: Varieties Introduced from Russia, Sweden and Denmark, 1185. The Fruiting of Trees in Consecutive Seasons, 1291. *See also* Citrus, Fruit, Apple, Peach, etc.
- Frutilla 468.
- Fundi, 37.
- Furcraea* spp., 229.
- Fustet, 1082.
- GALLUM, spp., 198.
- Gandul, 493.
- Garcinia mangostana*, 760.
- Gardening, *see* Market Gardening.
- Garlic, 387.
- Gases, Soil, 268.
- Germany: Cultural Experiments with *Trifolium pratense* from 18 Different Localities, 169. The International Trade in Feeding Stuffs, page 467. Study of a Small Holding at Kirberg, 1115. The Dessication of Potatoes, 1216.
- Germination, *see* Chemistry and Physiology.
- Ginger, 2, 387.
- Goats: Ancestry of the Goat, 205. Diuresis and Milk Flow, 324. Experiments in Germany on the Causes of Sterility in Male Goats, 420. Breeding in Morocco, 609. *Capra prisca*, an Unknown and Extinct Race of the European Domesticated Goat, 1300.
- Gomihan, 760.
- Gommier, 48.
- Goose: The Ancestry of the Goose, 426.
- Gooseberry in United States, 308.
- Gossypium*, *see* Cotton.
- Gossypol, 282.
- Goupia glabra*, 266.
- Grafting, *see* Fruit Growing.
- Gram (*Cicer arietinum* L.) Cultivation in India, 512. In Indo-China, 1157.
- Grapefruit, 1085.
- Grattes: fibre scraping machines, 229.
- Great Britain and Ireland: Agricultural Holdings Act 1908 (Scotland), 1. The Investigations of the Institute for Research in Agricultural Economics' University of Oxford, 102. Selection of Wheats for Spring

- Sowing, 164. Scotland's Upland Grazings, 167. Report of the Committee on Home-Grown Wheat 1913-1915, 291. Cow Testing and its Advantages, 322. The Cost of Milk Production in the Counties of Kent and Surrey; Further Report, 337. The International Trade in Feeding Stuffs, page 467. The Reclamation of Bog Land in Ireland, 494. The Importance of Silage in the Economics of Livestock Feeding, on Farms in East Anglia, 880. Mechanical Tillage Experiments with Tractors at York, England, in 1915, 897. The East Anglian Milk Recording Society, 1099. Experiments in the Application of Electricity to Plant Production, in England, 1260. Two New Seedling Hops of Commercial Promise, 1273. The Possibilities of Increased Crop Production, 1312.
- Greece: The Cultivation of Cotton, 401. Duty-free Admission of Agricultural Implements and Machinery into Greece, 547.
- Greenhart, 1266.
- Greenhouses, 98, 146.
- Guanol, 740.
- Guiana, British: The Field and Forest Resources of, 266. Cotton Hybridisation at the Botanic Gardens, 402.
- Guilleminea speciosa*, 864.
- Guinea, Portuguese: The Agricultural Products of, 956.
- Guizotia abyssinica*, 387.
- Gum Lac and the Breeding of *Tachardia*, 895.
- Gum Plants: In Chile, 498. In Brazil, 985. See also Rubber.
- Humera chilensis*, 498.
- Itta de Beira, 48.
- HACKIA, 266.
- Haemelopinus* spp., 79.
- Haki, 1082.
- Harsinghar, 1082.
- Hats made of Chinese Palm Leaf, 799.
- Hawaii: Effect of Fertilizers on the Physical Properties of Hawaiian Soils, 10. Steps Taken to Preserve *Kokia Rocki*, a Wild Relative of the Cultivated Cotton Plant in Hawaii, 403.
- Hazel: Hazelnut in the United States, 388. Sources of Supply of Hazelnuts, 1292.
- Hedges, Plants for Quickset, 498.
- Hedychium coronarium*, British Guiana, 266.
- Hedysarum* spp., 388.
- Hemp: The Effect of Feeding on the Composition of Milk and Butter: Linseed Cake and Hempseed Cake, 85.
- Henna, 756.
- Heredity, see Breeding.
- Hevea*: Development of Agricultural and Forest Resources of Liberia, 2. Experiments in Java on the Fickenden Method of Tapping *Hevea brasiliensis*, 173. Experiments on Extracting Rubber from Dead *Hevea* Leaves in Java, 174. Seasonal Variations in the Storage of Plant Food in *Hevea brasiliensis* and their Relation to Resting Periods, 298. On the Coagulation of *Hevea* Latex and a New Method of Coagulation, 406. Thinning out *Hevea* Plantations, 645. Wild Oil Plant of Para, Brazil, 864. *Hevea* in Java, 1281. Some Experiences on the Coagulation of *Hevea* Latex without the Use of Acetic Acid, 1282.
- Hiawaballi, 266.
- Hide and Skins: Silver Fox Farming in Eastern North America, 94. Subcutaneous Matter of Skins as Feed for Cows, 773. Cross between a Wild and a Domesticated Fur Rabbit in order to obtain a Good Fur, 894. Study of the Nitri-

- tion of different Leathers available for Agricultural Use, 961.
- Hierba del mar*, 498.
- Hieromina alchornoides*, 266.
- Holcus Sorghum* L., *H. lunatus*, H. spp., 388, 398.
- Honey: Investigation into the Returns of Swiss Beekeeping, 104. Chemical Composition of Hungarian Honey, 113. Ontario Beekeeper's Association Honey Crops Report for 1916, 1201.
- Hoooboballi, 266.
- Hop: Value of Farm Products in the United States and their Prices at the Farm in 1914, 103. Trials of Hop Cultivation in Italy, 650. Experiments with Potash Manures on Hops in Germany, 1182. Two New Seedling Hops of Commercial Promise, 1273.
- Horses: Experiments on the Immunisation of Horses against Glanders, 73. Studies on Piroplasmic Infection in Horses, 74. Average for the United States of Prices Paid to Producer, 103. Observations on the Skulls of Hybrids between Wild and Domestic Horses and Cattle, 200. The Problem of Horse Sickness in South Africa, 315. Inheritance of Coat Colours in Horses, 321. Breeding in Morocco, 609. Horse-Breeding in Italy in 1914: Strength of Stud, 665. Influence of Colour in Horse on the Cure of Mange, 878. The Adaptation of Different Breeds to the Livestock Industry in the United States, 992. Horse Breeding in Minnesota, 993. Stallion Service in the United States, 1091. The Very Short Gestation of a Mare, 1092. Experiments on the Feeding of Draught Horses made in Sweden from 1908 to 1915, 1192. The Horse-Breeding Industry in Saskatchewan, 1297.
- Huile, 498.
- Humidity of Soil: Effects of Temperature on Movement of Water Vapour and Capillary Moisture in Soils, 8.
- Humogen, 497, 846.
- Humus. *see* Soil.
- Hungary: Official Register of Selected Plants in Hungary, 31. The Chemical Composition of Hungarian Honey, 113. Fishing and Fish Culture, *page 180*. Fish Culture as a Means of Using Alkaline Land, 330. The International Trade in Feeding Stuffs, *page 467*. The Experimental Control of Distomatosis, 530. Edible Mushrooms of Hungary, 624. Injury to Livestock by *Simulium columbaccense*, in Hungary, 766.
- Hunterellus Hookeri* Howard Parasitic on the Tick *Rhipicephalus sanguineus*, 187.
- Hunteria africana*, 45.
- Hure Wallaba, 266.
- Hydraulics: Hydraulic Fill Method Used to Throw a Temporary Dam Across a Wide Stream, 676. Inverted Siphons Replace Bridges where Canals Cross Roads, 791. Small Irrigation Canals Lined with Concrete to Prevent Seepage Water Loss, 792.
- Hydrocyanic Acid: Experiments in Connection with Spinning Cotton after Fumigation, 912.
- Hygiene of Live Stock: Researches on the Causal Agent of Epizootic Lymphangitis, 71. Dourine and the Complement Fixation Test, 72. Experiments on the Immunisation of Horses against Glanders, 73. Studies on Piroplasmic Infection in Horses, 74. Studies on Bovine Piroplasmosis in Algeria, 75. Disease in Cows Due to the Flesh Fly, *Sarcophaga magnifica*, 76. Vaccination of Sheep against the Disease *Septicaemia pluviformis ovium*, 77. Life History of *Nematodius filicollis*, Rud., a Nematode Parasite

of the Sheep's Intestine, 78. Sheep Lice, 79. Symptomatic Anthrax in Swine, 80. The Chalcid *Hunterellus Hockeri* Parasitic on the Tick *Rhipicephalus sanguineus* in Rio Janeiro, Brazil, 187. Contribution on the Use of Sugar as a Dressing in Veterinary Surgery, 188. Contribution to the Study of Trypanosomiasis in Angola, West Africa, 189. On the Immobility of the Anthrax Bacillus, 190. Diagnosis of Glanders by Means of Coagulation Tests, 191. Virulence of Rinderpest in Cattle, 192. Effects of Tick Eradication on the Cattle Industry of the Southern Area of the United States, 193. Experiments in Vaccination against Anthrax, 312. Studies on Changes in the Degree of Oxidation of Arsenic in Arsenical Dipping Baths, 313. Precipitin-Reaction of Pork infested with *Cysticercus cellulosae*, 314. Problem of "Horse Sickness," in South Africa, 315. Bush Sickness, Work at the Mamaku Farm, New Zealand, 316. Beriberi and Cottonseed Poisoning in Pigs, 317. Observations on Fowl Cholera, 318. Control of Contagious Epithelioma in Chickens by Vaccination, 319. Studies on the Heredity of Rabies, 413. Treatment of Foot-and-Mouth Disease by Means of Hellebore, 414. The Experimental Control of Distomatosis in Hungary, 530. Treatment of Navel-Itch by means of Serum derived from the Blood of the Mare, 531. Modification of Theiler's Method for the Immunisation of Cattle against Piroplasmosis, 532. Plague attacking Wild Ducks in Milan, 533. Emphy sarcoid (*Emphy sarcoidum Foth*), a new Vaccine for the treatment of Symptomatic Anthrax, 659. Tests with Salvarsan in the Treatment of Glanders;

its Influence on the Formation of Antibodies in the Blood of Horses, 660. The Virulence of the Blood of Animals suffering from Epizootic Foot-and-Mouth Disease, 661. Injury to Livestock by *Simulium columbaccense*, in Hungary, 766. The Possible Passage of Trypanosomes into Milk, 767. Enquiries and Experiments in Connection with the Immunity of Cattle against Epizootic Foot-and-Mouth Disease, 768. Experiments in Control of Livestock Epidemics by means of Methylene Blue, 877. Influence of Colour in Horses on the Cure of Mange, 878. A Contribution to the Study of the Treatment with Sugar of Surgical Injuries of the Foot, in Horses, 879. The Effects of Snake Venom on Domestic Animals and the Preparation of Antivenomous Serum, 1086. The Immunisation of Cattle against Tuberculosis; Results of 10 Years' Trials Carried out at the Leipzig Veterinary Institute, 1294. A New Parasite on Sheep Maggot Flies, 1295.

Hygiene, Rural: Investigations in Egypt on *Bilharzia haematobia*, a Parasite of Man, 4. Biological Studies on the House Fly, 137. A Case of Septicemia in Man produced by *Streptococcus equinus* in the Anglo-Egyptian Sudan, 138. Healthiness of Rice Fields in Italy, 267. Oil of Citronella as a Preventive of Mosquito Bites, 382. Notes on the Period preceding Oviposition in the Domestic Fly, 489. Observations on 5 North-American Species of *Simulium* and their possible Action in disseminating Infectious Diseases, 610. An Experimental Study of Pellagra in Mississippi, United States, 611. Brewer's Yeast as a Source of Vitamines, 612. Recent Researches on the Possible Trans-

- mission of Animal Trypanosomiasis to Man, 840. The Oxygen Consuming Powers of Natural Waters, 1159. Immunity to Cow Pox as a Result of Intravascular Injections, 1160. Testing, Storage and Preparation of Unpolished Rice, 1254.
- Hymenaea Courbaril*, 266.
- IBURU, 37.
- Imperata* sp., 148.
- Improvements, see Agricultural Improvements.
- India: The Punjab Triple Canal System, 12. Green-manuring in the Central Provinces, 147. On the Inheritance of Some Characters in Wheat, 159. American Cotton in the Punjab, 171. The International Trade in Feeding Stuffs, page 467. Green Manuring in India, 387. Agriculture in India, 488. Commercial Development of Forests, 658. The Dyeing Value of Some Indian Dye-Stuffs, 1082.
- Indigo: Experiments on the Physiology of Indigo-yielding Glucosides, 44. Experiments in Java with Green Manures, 148. Crop in India, 488. Indian Dye stuffs, 1082.
- Indo-China: The Agricultural Resources of Indo-China, 1157.
- Industries Depending on Animal Products, see Dairying, Eggs, Meat, Wool, etc.
- Industries Depending on Plant Products: Agricultural Dessicating Installations, 219. Bakhar, the Indian Rice Beer Ferment, 227. The Fibre Industry of Mauritius, 229. The Canned Fruits Industry in California, United States, 230. Use of Pressed Apple Pomace, 330. The Presence of Copper in Tomatoes and Tomato Preserves, 502. The Ferments of Pine-apple Wine, 556. Raisin Making in California: Influence of Ripeness on the Returns, 558. *Pectinobacter amylophilum*, a New Organism which may be of Practical Importance in Flax Retting, 797. New Method of Flax Retting Invented at the Technological Institute of Petrograd, 798. Hats made of Chinese Palm Leaf, 799. Industrial Retting of Textile Plants, page 1067. Experiments in Connection with Spinning Cotton after Fumigation with Hydrocyanic Acid, 912. The Conversion of Fruits and Vegetables into Dried Products: Experiments at the Royal School of Horticulture and Pomology of Florence, Italy, 1019. Utilization of Cherry By-products, 1020.
- Inhame da costa, 39.
- Institutions, see Agricultural Institutions.
- Iodine Content of Stassfurt Salts, 1167.
- Iris: Intermediate Characters in Various Hybrid Species of *Iris*, 161.
- Irrigation: The Punjab Triple Canal System, 12.
- Italy: Agricultural Development in the Roman Campagna, 3. The Growth of the Black Poplar in Tuscany and its Utilization, 70. The Frequency of Low Temperature at Vercelli and its Effect on the Cultivation of Rice, 141. Wheat Growing Competitions in the Roman Campagna in 1913, 165. The Healthiness of Rice Fields in Italy, 267. Comparative Yields of Cereals in Italy, 267. Japanese Rice "Sekyama", 292. The Cultivation of Pistachios in Sicily, 336. The International Trade in Feeding Stuffs, page 467. The Value of *Saccharum spontaneum* in Binding Moving Sands in Sicily, 491. Colonial Plants of Economic Importance Cultivated in the Royal Colonial Gardens of Palermo and Capable of Acclimatisation in Sicily, 499. The Com-

- position of Italian Wheats, 509.
 Rice-Growing in Italy, 511. Improvement of Italian Sheep, 538.
 The Selection of Cereals in Italy, page 777. Sesame-growing in Sicily, 644. Trials of Hop Cultivation in Italy, 650. Horse-breeding in Italy, in 1914, 665. Experimental Rearing of the Silkworm in "Tilimbars", 669. Production of Medicinal Plants in Italy, 757. Observations on Direct Bearers at the Royal Oenological School of Conegliano, Italy, 763. The Guernsey Breed of Cattle in Italy, 777. Table Wines and Blending Wines of Sicily, 794. Electric Tillage in the Province of Piacenza, 896. Experimental Studies in Italy, for determining the Cultivation Value of Two Wild Lucernes, 980. Selection and Hybridisation of American Vines in Italy, page 1393. The Work of the Institute for Research on Silkworms at Portici (Italy), 1202.
- ACARANDA COPAIA, 266.
 ack Bean, 492.
 angli Nil, 1082.
 apan : The International Trade in Feeding Stuffs, page 467.
 arena, 864.
 ava : Experiments in Java with Green Manures, 148. Data Collected During a Visit to Besocki (Java) for the Purpose of Studying Tobacco-Growing, 175. Texture of the Soil in Java, 619. Hevea in Java, 1281. Coffee in Java, 1284.
 awary, 864.
 elutong, 48.
 erusalem Artichokes, 219, 395.
 ibnea *Spectabilis*, 498.
 ujube in United States, 388.
 uniperus and Its Commercial Importance, 655.
 ute Plants : Green-Manuring in India, 387. Agriculture in India, 488.
- KABICHUELA CIMARRONA, 492.
 Kabukalli, 266.
 Kachnar, 1082.
 Kafir Corn, 388.
 Kainit, see Manure Potash.
 Kakaralli, 266.
 Kamela, 1082.
 Kaoliang, see Sorghum.
 Kapok : Kapok Carding Machine, 96.
 Katka, 1082.
 Kathal, 1082.
 Kefir, 454.
 Kelp, 16.
Kerstingiella gencarpa, 388.
 Koji, 227.
 Kokia Rocki, 403.
 Koumis, 454.
 Kuip, an open wooden tub, page 14.
 Kulthi, 147.
 Kusum, 1082.
- LABEN RAIEB, 680.
 Lac : Gum Lac and the Breeding of *Tachardia*, 895.
 Lac Dye, 1082.
Landolphia : Rubber-producing Plants in Southern Italian Somaliland, 45.
Lansium domesticum, 760.
 Lansone, 760.
Lardizabala biternata, 498.
 Lechin, 609.
Lecythis corrugata, 266.
Lecythis usitata, 864.
 Legislative and Administrative Measures : Compensation Claims under the Agricultural Holdings (Scotland) Act 1908, 1. Legislative Measures for the Sale of Milk, page 635. Legislative Measures adopted by the Republic of Colombia for Agricultural and Livestock Development, 608.
Lepidium sativum, 28.
 Lettuce Crop ; Average Weight per Plant, 1084.
 Liberia : Development of Agricultural and Forest Resources, 2.
 Lice, Sheep, 79.

- Lichen : Percentage Composition of the dry Lichen, *Cladonia rangiferina*, 881.
- Lime, 1157.
- Lime : Relation of Lime to Production of Nitrates and Mineral Nitrogen, 145.
- Lime Growing : Value of Lime Seed as a By-product of the Lime Industry, 107. In British Guiana, 266.
- Lipoti, 760.
- Lippia insignis*, 864.
- Litre, 498.
- Llaretta, 498.
- Llengue, 498.
- Locust, 266.
- Lolium italicum* and *L. perenne*, 398.
- Lotus : Cultivation of the Lotus (*Nelumbium speciosum*) and the Microscopic Examination of its Flour, 40. The Distribution of the Genus *Lotus* in European Russia and the Caucasus, 300.
- Lucerne : Effect of Frequent Cutting on the Water Requirement of Alfalfa, 166. Managing Alfalfa Pastures in Arizona, 334. Forage Grasses imported into the United States, 388. Growth of the Root System of *Medicago sativa*, 847. Experimental Studies in Italy for determining the Cultivation Value of two Wild Lucernes, 980. *Medicago orbicularis*, Attempts at Introduction into the United States, 981. Lucerne Inoculation Experiments, 1064, 1180. Chemical Composition of Alfalfa as Affected by Stage of Maturity. Mechanical Losses and Condition of Drying, 1076. Comparative Yields of Hay from Several Varieties and Strains of Alfalfa in South Dakota, U. S. A., 1278.
- Lucid, 498.
- Lucuma vulparadisea*, 498.
- Lymphangitis, Epizootic, 71.
- Lyon Bean, 492.
- MACADOMIA TERNIFOLIA, 396.
- Machinery and Implements, Agricultural : Protecting Pollinated Blossoms, 24. Kapok Carding Machine, 96. A Soil Sampler for Soil Bacteriologists, 143. New Plans of U. S. Department of Agriculture Concerning Farm Machinery and Implements, 216. Screw Furrow-Opener, 217. Self-lighting Attachment for Smudge Pots, 218. Agricultural Desiccating Installations, 219. Implements and Machinery at the Smithfield (London) Show, December 1915, 331. • Apparatus for the Cheese Curing Room, 430. Chain Pump or Conveyor, 431. Duty-free Admission of Agricultural Implements and Machinery into Greece, 547. Mirrors for Motor Tilling Machines, 548. A Chaff-cutter for Litter, Provided with Pneumatic Delivery and Press, 549. Tree-felling by Machinery, 550. Official Trials of Tillage Machines in France, 670. A Cooperative Society for Machine Ploughing, 671. Quickly detachable Plough Shares, 672. Slow-speed and High-speed Motors, 673. New Method for the Detection of Unexploded Shells in the Field, 674. Strecker's Liquid Manure Drill, 781. Vasio Winnowing Machine, 785. The Vasio Paddy Cleaning Machine, 786. Motor Driven Apple Grading Machine of High Capacity, 787. A Tractor for the Garden, 788. Experiments on the Fuel Used in Farm Portable Engines, 789. Electric Tillage in the Province of Piacenza, Italy, 806. Mechanical Tillage Experiments with Tractors at York, England, in 1915, 807. • Portable "Vasio" Cereal Drier, 808. Machine for Gathering Cotton Fruits without Injury to the Plant, 809. Milk Can Emptying Machine, 900. Produce

- tion of Agricultural Machinery in the United States, in 1914, 1003. "Nisco" Manure Spreader, 1004. Fore-carriage for Harvesting Machines, 1005. Apparatus for Extracting the Oil from Oily Substances by means of Non-inflammable Solvents, 1006. Appliance for Burning Tree Stumps *in situ*, 1007. Enquiry into the most usual Depreciation Rates for Agricultural Machinery in Minnesota, 1013. Machinery Cost of Farm Operations in Western New-York, 1110. Mallet Motor Cultivator with Controlled Rotary Blades, 1111. Petrol Tractor for Drain Digging, 1112. Simple Steam Sterilizer for Farm Dairy Utensil, 1113. Manufacture and Co-operative Supply of Agricultural Machinery and Implements in the Russian Empire in 1913, 1205. Motor Ploughing in France, 1206. Simple Method of Calculating the Cost of Mechanical Cultivation, 1207. Dust Explosions and Fires in Grain Separators in the Pacific Northwest, 1208. Mechanism for Clutching and Declutching the Feed Device in Straw Balers, 1209. New Dressing Machine for Spherical Grain, 1306. The Elbert Vaughan Portable Saw driven by Petrol Motor for Tree Felling, 1307. Lorry for Transporting Timber in Long Lengths, 1308. "Silicate Cotton" as Insulating Material for Boilers and Refrigerators, 1309. Review of Patents, 97, 220, 332, 432, 551, 675, 790, 901, 1008, 1210, 1310. *See also* Plough, Tractors, etc.
- Madagascar: *Urena lobata* a Wild Malvacea, 172. Study of Sericulture, 891.
- Majith, 1082.
- Magnesia: Some Factors Affecting the Efficiency of Phosphates difficultly Soluble, 14. The Relations between the Presence of Magnesium in Leaves and the Function of Assimilation, 745.
- Maholo, 760.
- Maize: Illustration of Inbreeding, 25. The Maize Producing Industry in Victoria, 33. Value in the United States and Prices at the Farm, 103. Labour Cost of Producing Maize in Ohio, 223. Grading Maize in Rhodesia, 235. Yields in Italy, 267. Relation of Cultivation and of Number of Stalks per Hill to Yield of Maize Crop, 293. Maize Breeding in Cuba, 396. Trials of different Varieties of Maize, at the Royal School of Agriculture of Caluso, Italy, 637. Correlated Characters in Maize Breeding, 1069. Results of 20 Years Experiments on Maize at the Agricultural Experiment Station, Ohio, 1073. Comparative Study of the Root System and Leaf Areas of Corn and the Sorghums, 1170.
- Malaya: A Promising Coconut Clearing, 401.
- Manganese: Experiments on Fertilising Sugar Beets with Manganese, 52. Recent Investigations on the Action of Manganese on Plant Growth, 274. Manganese in Wheat, 625. Catalytic Manures: Manganese as a Catalyser of the Biochemical Reactions by means of which Plants Assimilate Atmospheric Nitrogen through Bacterial Agency, 962. Manurial Experiments with Manganese Slag, in Germany, 1169.
- Mango: Classification of Mango Varieties, 183. Plants and Seed Introduction into United States, 388. Plant Breeding in Cuba, 396.
- Mangosteen, 760.
- Mani cimarrona, 493.
- Manihot: *Manihot Glaziovii* in Somaliland, 15. *M. utilissima*, 396.
- Manna: Production of Manna by Olive Trees in Algeria, 405.

- Manures and Manuring : Manuring of Vines, *page 8*. Effect of Fertilizers on the Physical Properties of Hawaiian Soils, 10. Half Yearly Review of the International Movement of Chemical Fertilizers, 13. Control of the Importation, Manufacture and Sale of Chemical Manures in Portugal, 17. Experiments on Fertilising Sugar Beets with Manganese, 52. Manuring of Cacao at Peradeniya, 55. Absorption of Ammonia by Superphosphates and the Use, as Fertilizers, of the Phosphates thus Obtained, 272. The Displacement of the Potash and Phosphoric Acid Contained in Certain Rocks by Some Substances Used as Fertilizers, 385. The Respective Values of Organic and Inorganic Manures, 493. In Sweden, *page 92r*. Hygienic, Scientific and Economic Disposal of Human Excreta, 735. Study of the Nitrification of Different Leathers available for Agricultural Use, and Sulphurated Rape Cakes, 961. The Effect of Heavy Dressings of Mineral Salts on the Development and Structure of Plants 1067. The Industrial Uses of Seaweed, More Especially as Manure, 1261. Manurial Trials in Java, 1265.
- Manures, Farnyard : The Utilisation of the Nitrogen of Stable Manure in Relation to the Date of its Application, 495. Injurious Effect of Farnyard Manure on the Balance of Nitrogen in the Soil, 620. Streck-er's Liquid Manure Drill, 784. Rapid and Simple Determination of the Nitrogen in Liquid Manure by means of a Densimeter, 845.
- Manures, Green : Green Manuring in the Central Provinces, India, 147. Experiments in Java with Green Manures, 148. Green Manuring in India, 387. Relation of Green Ma-
nures to the Failure of Certain Seed-
lings, 734. Green Manuring with Leguminous Crops in Java, 1262.
- Manures, Nitrogenous : The Absorption of Ammoniacal Gas by Superphosphates and the Use as Fertilisers of the Phosphates thus Obtained, 272. Manurial Experiments in Germany with New Forms of Nitrogenous Fertilizers, 273. The Question of Sulphate of Ammonia in Russia, 739. Manuring Tests with the New Nitrogenous Manure "Guanol" in Germany, 740. Action of Ammoniacal Salts on the Growth of Barley, 970. Effect of Varying Amounts of Admixed Water upon the Decomposition of Crude Calcium Cyanamide and the Formation of Dicyanamide, 1168. Nitrate of Soda and Ammonium Sulphate on Sugar Cane in Java, 1264.
- Manures, Phosphatic : Some Factors Affecting the Efficiency of Phosphates Difficultly Soluble, 14. Tetraphosphates in Rice Lands, 35. Experiments in Germany on the Effect of the Phosphoric Acid Contained in Different Kinds of Basic Slag, 149. The Absorption of Ammoniacal Gas by Superphosphates and the Use as Fertilisers of the Phosphates thus Obtained, 272. "Rhenaniaphosphat", a new Phosphatic Fertiliser containing Potassium, Manufactured in Germany, 496. The Action of Superphosphates on the Root System of Plants, 504. Investigations into the Utilisation of Phosphorites in Russia, 622. The Solubility of "Fluorspar Slag" and Mineral Phosphates in Citric Acid, 736. "Tetraphosphate", 1063. Recent Investigations at the Imperial Institute, London: Whale's Bones from the Falkland Island, 1162. Research on Superphosphates, 1165. Substitutes for Basic

- Slag in Italy, 1166. The Solubility of Phosphoric Acid in Mineral, Basic and Calcined Phosphates, and in Basic Slag, 1263.
- Manures, Potash: Potassium Salts: An Economic Geological Study, 15. Potash from Kelp, 16. The Displacement of the Potash and Phosphoric Acid contained in Certain Rocks by Some Substances Used as Fertilizers, 385. Chemical Composition of "Potassic Ash", 623. Adsorption of Potassium by the Soil, 726. Potash in Banana Skins and Stalks, 737. Iodine Content of Stassfurt Salts, 1167.
- Maple, Tree, Sugar, 390. In Canada, page 1239.
- Maqui, 498.
- Marajá, 864.
- Marancel, 498.
- Marang, 760.
- Margaropus annulatus*, 74.
- Margines, 445.
- Market Gardening: Frost Protection, 5. Protecting Pollinated Blossoms, 24. *Chenopodium quinoa*, 59. Suggested Explanation of the Abnormally High Records of Doubles Quoted by Growers of Stocks (*Matthiola*), 305. Green Manuring in India, 387. Plants Indigenous to Chile, 498. The Acclimatisation of Plants and their Adaptation to the Soil by Grafting, 524. The Agricultural Products of Portuguese Guinea, 956. Summer Treatment of Greenhouse Soil, 1084. Cultivation and Marketing of Flowers and Early Produce on the Riviera from Toulon to Mentone, 1184.
- Matisia paraensis*, 864.
- Mato de la playa, 492.
- Matraca, 492.
- Matthiola*, 305.
- Mauritius: The Fibre Industry, 229.
- Mauritius Bean, 492.
- Maximiliana: Fruits and Oil, 841.
- Meadows and Pastures: Scotland's Upland Grazings, 167. Native Pasture Grasses of the United States, 170. In Morocco, 609. In Sweden, page 921. Accumulated Fertility in Grassland in Consequence of Phosphatic Manuring, 752. Economic Desirability of Tree Planting in Grassland, 975. Experiments on the Cultivation of Meadows on Peat Soils in Russia, 1075. Pasture Problems: Indigenous Plants in Relation to Habitat and Sown Species, 1277. Comparative Yields of Hay from Several Varieties and Strains of Alfalfa in South Dakota, 1278.
- Meat: The Precipitin-Reaction of Pork Infested with *Cysticercus cellulosae*, 314. The Microscopic Analysis of Meat and Fish Meals, 343. Biochemical Comparisons between Mature Beef and Immature Veal, 455. Maize Silage and Alfalfa Hay for Beef Production, 537. The Production of Beef in South Africa, 915. Digestibility of Very Young Veal, 1121. Tendency Towards a Levelling of Prices for Fresh and Frozen Meat, 1123.
- Mechanical Milking, 1022.
- Medicinal Plants: New Experiments Carried out in 1914 at the Medicinal Plant Experiment Station at Koloszar, Hungary, 303. Plants Indigenous to Chile which are Cultivated, Capable of Cultivation or Useful, 498. The Principal Problems in Relation to Medicinal Plants and their Active Principles, 651. Production of Medicinal Plants in Italy, 757. Recent Investigations at the Imperial Institute in London, 841. The Harvesting and Cultivation of Medicinal Plants in France, 1083. Preliminary Work at the Chemical Laboratory of the Soukoun Experiment Station, Caucasus, on the Extraction of Medical

- Substances from Local Plants (Eucalyptus, Wild Mint, Camphor, Castor Oil, etc), 1183.
- Melon: Cantaloup Marketing in the Larger Cities with Car-Lot Supply, 1914, 236. Introduction into United States, 388. In Morocco, 609.
- Meteorology: Frost Protection for Fruit and Vegetables in the United States, 5. Agricultural Meteorology in the United States, 6. The Composition of Rain Water at Montevideo, 1909-12, 7. Effect of Temperature on Movement of Water Vapour and Capillary Moisture in Soils, 8. Meteorology in Relation to Agriculture in Canada, page 177. Relation between Humidity and Yield of Winter Wheat in Western Kansas, 140. The Frequency of Low Temperatures at Vercelli, Italy, and its Effect on the Cultivation of Rice, 141. Influence of Temperature on Respiration in Fruit, 157. The "Eredia" Dewmeter, 384. Hourly Transpiration on Clear Days as Determined by Cyclic Environmental Factors, 392. Temperature Changes due to Terrestrial Radiation and Relation of the Latter to Plant Growth, 723. Effect of Drought on the Size of Grapes, 1187.
- Methods of Cultivation *see* Tillage.
- Micliuratu, 680.
- Microbiology, *see* Bacteriology and Soil Organisms.
- Mida acuminata*, 388.
- Miel de palma, 498.
- Milk: Influence of Temperature on Proteolytic Activity of Lactic Ferments, 109. Experiments in Sweden on the Prolonged Pasteurisation of Milk, 119. The Cause of the Loss of Nutritive Efficiency of Heated Milk, 231. Researches on the Proteolytic Action of Lactic Ferments, 232. Method for Detecting the Admixture of Goat's Milk to the milk of Cows, 342. Advantages of Using Milk of Low Bacterial Content in Studying the Phenomena of Lactic Fermentation, 450. Milk Quality as Determined by Modern Score Cards, 451. The Detection of Added Water in Milk in India, 452. The Determination of Citric Acid in Milk, 559. On the Resistance of Non-sporing Bacteria in Milk to the Action of Heat, 560. A New Defect in Milk Caused by *Bacterium Lactis Aerogenes* Fischerich, 1023. The Grading of Milk 1119. Pasteurization of Milk in the Bottle, 1120. Investigations on the Protease of Milk Bacteria, 1219.
- Milling: The Effect of the Density of a Wheat upon its Flour Yield, 106. Residues of Milling Industry page 470. Preparation of Germ-free Maize Flour, 1017. Milling of Rice, 444.
- Mimosa guianensis*, 266.
- Mimosa cuneifolia*, 48.
- Mimosa globosa*, 266.
- Mirrors for Motor Tilling Machines, 548.
- Molle, 498.
- Monguba, 864.
- Mora, 266.
- Morocco: Agriculture and Livestock in the Spanish Gharb (Morocco), 609. Organization of Agricultural Services in the French Zone of the Empire of Morocco, page 1565.
- Motors: Slow-speed and High-speed Motors, 673. Electric Tillage in the Province of Piacenza, Italy, 896. Mechanical Tillage Experiments with Tractors at York, England, in 1915, 807. Motor Ploughing in France, 1206. Simple Method of Calculating the Cost of Mechanical Cultivation, 1207.
- Muermo, 498.
- Mulberry: Economical Production of Mulberry Leaves, 57. On the Par-

- tial Disinfection of Mulberry Leaves for Silkworms, 91. Chemical Composition of the Autumn Leaves of the Mulberry, 176.
- Mumbaca : 864.
- Murcha, 227.
- Murtillo, 498.
- Mushrooms, 498, 624.
- Musk Rat in Canada, 215.
- Myristica (Viola) Bicukhya*, 864.
- Myristica surinamensis*, 266.
- NALCAS, 498.
- Nasonia brevicornis*, 1295.
- Naspal, 1082.
- Natal Grass, 979.
- Natri, 498.
- Nectandra*, spp., 266.
- Nelumbium speciosum* : Cultivation of the Lotus and the Microscopic Examination of its Flour, 40.
- Nematodirus filicollis*, 78.
- Netherlands : The International Trade in Feeding Stuffs, page 467.
- New South Wales : Banana Growing, 1186. New Dairy Industry Legislation, 1218.
- New Zealand : Features of the Sheep Industries of the United States, New Zealand, and Australia Compared, 204. The International Trade in Feeding Stuffs, page 467.
- Nitrogen : Some Factors Affecting the Efficiency of Phosphates Difficultly Soluble, 14. Relation of Lime to Production of Nitrates and Mineral Nitrogen, 145. Injurious Effect of Farmyard Manure on the Balance of Nitrogen in the Soil, 620. On the Capacity of White Mustard to Fix Nitrogen and Enrich the Soil, 621. Soluble Non-Protein Nitrogen of Soil, 724. Influence of Resin and Tannin on the Balance of Nitrogen in the Soil, 725. A Biochemical Study of Nitrogen in Certain Legumes, 1066. Nitrogen Fixation, Nitrification, Denitrification and the Production of Sulphuretted Hydrogen by Bacteria in the Arctic Ocean, 1267.
- Norway : The International Trade in Feeding Stuffs, page 467.
- Nutritional Deficiency, 415.
- Nuttalia equi*, 74.
- Nuttalliosls, 74.
- Nux vomica*, 387.
- Nyctanthes Arbor-tristis*, 1082.
- OATS : Average for the United States of Prices Paid to Producers, 103. A Case of Albinism Due to Cold and Occurring in the Leaves of Uruguay Oats, 153. Investigations on the Spontaneous Heating of a Heap of Oats, 234. Comparative Yields of Cereals in Italy, 267. Comparative Tests of 9 Varieties of oats at Torrestorp, Sweden, 630. Influence of Methods of Sowing Oats on Crop Yield ; Experiments in Russia, 636. Investigation into the Root System of Oats, 741. Comparative Tests with 8 Races of Oats, at Flahult, Sweden, 747. Experiments in Siberia on Different Varieties of Oats, 966. Oat Growing in the State of Washington, 971.
- Oenocarpus*, spp., 864.
- Oilcrops : Growing in India, 188. Influence of Green Manure on the Germination of Oil Seeds, 755. Wild Oil Plants of Para, Brazil, 864. Crops Yielding Oil of Portuguese Guinea, 956. Oils and Fats in Indo-China, 1157. The Cohune Palm (*Attalea Cohune*) and its Products, 1280.
- Oil-mill : Residues of Oil Industry, page 491. The Utilisation of the Residues of Oil Extraction, from Olives, 445. A Cheap Process for Extracting the Oil from Oil Fruits and Seeds and their Residues (Black Olives and Oilcakes) by Means of Non-inflammable Solvents, 1018.
- Oil Palm, see Elaeis.

- Oils various : Value of Lime Seed as By-product of the Lime Industry, 107. Investigations into Vegetable Oils, 626. Recent Investigations in Reference to Maximiliana Fruits, 841. Preparation of Germ-free Maize Flour; Investigations in Hungary, 1017. Utilisation of Cherry By-products, 1020. The Oil of Water Melon Seeds, 1162.
- Olanamba, 388.
- Olives : Production of Manna by Olive Trees in Algeria, 405. In Morocco, 609. Nitrogen Requirements of the Olive Tree, 1068. Olive-Growing and Production in Spain, *page 1727*. Nitrogen Requirements of the Olive Tree, 1081.
- Omphalobium Lambertii*, 266.
- Onions in United States, 103. In India, 387.
- Orange : The Washington Navel Orange, 67. Seeds and Plants Imported into the United States, 388. Colour Changes due to Micro-organisms in the Distillates of Plants and Flowers, 448. The Improvement of the Washington Navel Orange by Means of Bud Selection, 507. Crop in Morocco, 609. The Orange tree in Algeria, 871.
- Osier Culture in France, 1080.
- Oxycoccus macrocarpus* : The Cultivation and Manuring of, 409.
- PACHIRA AQUATICA, 864.
- Pachwai, 227.
- Packing and Transport of Agricultural Products, *see* Trade of Agricultural Products.
- Pacul, 498.
- Palo colorado, 498.
- Palms : Hats made of Chinese Palm Leaf, 799. *Attalea Cohune*, 1280. *See* Date Palm, *Elaeis*.
- Pangue, 498.
- Panicum sanguinale*, 296.
- Paper : Zacaton as a Paper-making Material, 108. Utilisation of American Flax Straw in the Paper and Fibre Board Industry, 340. The Paper Birch in Canada, *page 1238*. Paper Making Materials from South Africa, 1162. Spanish Forests and Paper Manufacture, 1188.
- Papaya, Variation in the Flowers, 182.
- Seeds and Plants Imported into United States, 388.
- Papilla, 498.
- Paraguay : *Panicum sanguinale* or False Cebadilla, a Wild Forage Plant, 296.
- Parrilla, 498.
- Pasania cornea*, 388.
- Paspalum*, spp., 37, 978.
- Patana, 864.
- Patang, 1082.
- Patents, *see* Machinery.
- Pea : The Green Pea as a Forage Plant in North America, 982.
- Peach : Frost Protection for Fruit and Vegetables in the United States, 5. Pollination of Fruit Trees, 61. Buried Peach Orchards, 179. Production of Peaches in the United States, 180. Peach Supply and Distribution in 1914, 237. Soils of Massachusetts and Connecticut, 307. Report on New or Noteworthy Fruits by the New York Agricultural Experiment Station, 308. "Ariboad" Peach; A New Variety from France, 309. Cost of Running a Peach Orchard in North Carolina, U. S. A., 440. The Taxonomic Value and Structure of the Peach Leaf Glands, 848.
- Peanut : The International Trade in Feeding Stuffs, *page 467*. Experiments in Growing *Arachis hypogaea* in Eastern Uruguay, 519. Crops Yielding Oil of Portuguese Guinea, 956.
- Pear-tree : Frost Protection in the United States, 5. Table Showing Results Obtained with Different

- Fruits by Cross-Pollination, 61. Value of Farm Products in the United States and their Prices at the Farm in 1914, 103. New Observations on the Concretions in the Pulp of Pears, 275. Wild Pear in United States, 388. Attempted Classification of Pears, 869. *Pyrus calleryana*, an Interesting Species of Pear Tree, 870.
- Peat-soil: The Reclamation of Bog Land in Ireland, 494. Report on Experiments with Bacterised Peat or Humogen, 497, 846. The Treatment of Peat Beds to Prevent Loss of Nitrogen, 1060. Experiments on the Cultivation of Meadows on Peat Soils in Russia, 1075. Investigations on the Microorganisms of Peat Soils, Waste and Cultivated, 1258. Investigations on the Peat Beds and the Peat Industry in Canada, 1323.
- Pectinobacter amylophilum*, a New Organism which may be of Practical Importance in Flax Retting, 797.
- Peepul, 1082.
- Pentaclethra filamentosa*, 864.
- Pepper-cultivation in Banka, 1286.
- Peppermint, 303.
- Pergulia extensa*, 45.
- Persimmon, 872. Persimmon (*Diospyros kaki*) in United States, 388.
- Pennu, 498.
- Phaseolus adenanthus*, 492.
- Pheasant, see Aviculture.
- Philippines: The Sugar Industry, 228. New or Noteworthy Tropical Fruits, 760.
- Phokadie, 266.
- Phonolit, see Manures, Potash.
- Photee, 266.
- Phyllanthus Emblica*, 387.
- Physics and Chemistry of Soil, see Soils.
- Physiology, Animal, see Anatomy.
- Physiology, Plant, see Chemistry and Physiology.
- Phytelephas, 881.
- Piassava, 2, 754.
- Picea: In Canada, page 1235.
- Pichi, 498.
- Pig Keeping: Symptomatic Anthrax in Swine, 80. Pig-feeding Experiments With Aftermath Hay Meal, 88. Feeding Experiments on Young Pigs with Skim Milk Supplemented by Cream Substitutes of Varying Protein Content, 89. Averages for the United States of Prices Paid to Producers of Farm Products, 103. Fecundity and the Relation between Male and Female Descendants in Improved German Pigs, 206. Beriberi and Cottonseed Poisoning in Pigs, 317. Experiments in Swine Feeding at the Oregon Agricultural College Experiment Station, 421. Clover Flour as a Feed for Pigs, 422. Ground Wheat versus Whole Wheat for Fattening Pigs, 540. On the Use of Fern root in German Pig Feeding Experiments, 541. Experiments in Pig Feeding with Potato Peel, 778. Experiments in Feeding Pigs with Straw Meal and Straw rendered Soluble by Caustic Soda, 779. Value of Lucerne and other Green Forage in Pig Feeding, 780. Pig Breeding and Intensive Matze and Soya Pasturage in the United States, 889. Device for Protecting Sucking Pigs, 904. Experiments in Pig-Feeding Carried out by the Experimental Sub-Station of North Platte, Nebraska, United States, 997. Specific Effects of Different Rations on the Growth of Pigs, 998. Wheat as a Food for Fattening Pigs, 999. The Poland-China Breed of American Pigs, 1102. Ration Experiments with Swine, 1103. The Fattening of Pigs on Pasture under Forest 1104. British Berkshire Society's Report, 1105. Fish Meal as Food for Pigs, 1301.

Pigeon Pea, 493.

Pili, 760.

Piñal, 498.

Pine: Experiments on Feeding Lambs with Pine Needles, 87. In Canada, page 1234. See also Forestry.

Pineapple: Intensive Cultivation of Pineapples with Citrus in Queensland, 304. The Ferments of Pineapple Wine, 556.

Piratinera Alicastrum, 388.

Pircum, 498.

Piroplasmosis, 74, 75.

Pistachios: The Cultivation of Pistachios in Sicily, 336.

Pitanga Brazilian, 761.

Pithecolobium gummiferum, 985.

Pits for Winter Gardening, 98.

Plant Breeding: Plants Watered with Salt Solutions and the Possibility of the Transmission of their Acquired Characters, 28. Inheritance of Habit in the Common Bean, 29. Apple Breeding in Idaho, 30. Official Register of Selected Plants in Hungary, 31. Effect of Sorting Grain on the Yield of Wheat, 32. On the Inheritance of Some Characters in Wheat, 159. Relation between Sugar Content and the Chemical Characters of the Descendants of the Same Plant of Sugar Beet in the 1st Generation, 160. Intermediate Characters in Various Hybrid Species of *His*, 161. Experiments in the Improvement of Wheat at Svalöf, Sweden, 286. New Strain of Rye Selected at Svalöf, 287. Mutations of Wild Species of Tubiferous *Solanum*, 288. Selection Experiments with Timothy Grass at Svalöf, 289. Inheritance of Length of Pod in Certain Crosses, 394. New Varieties of Plants on Sale by Vilmorin-Andrieux, Paris, 395. Plant Breeding in Cuba, 396. Potato Selection by

Means of Sexual and Asexual Reproduction, 506. The Improvement of the "Washington Navel Orange" by Means of Bud Selection, 507. A Fruit of *Juglans regia* containing a Kernel of *Corylus Avellana*, 508. Comparative Tests of 3 Varieties of Rye at Torestorp, Sweden, 629. Comparative Tests of 9 Varieties of Oats at Torestorp, Sweden, 630. Cross between a Wild Crucifer and a Cultivated Crucifer with Tubercised Root, 631. Breeding Farm Crops in Iowa, United States, 632. Studies on the Root System of Plants in Reference to Selection and Drought Resistance, 741. Comparative Tests of 4 Varieties of Barley at Torestorp, Sweden, 746. Comparative Tests with 8 Races of Oats, at Flahult, Sweden, 747. Strawberry Breeding in the United States, 748. "Thule" a Variety of Wheat Suited to Central Sweden, 857. Experiments in Siberia, on Different Varieties of Oats, 966. Work in Tobacco Selection at the Experimental Station of Dejember, Residence of Besocki, Java, from 1912 to 1915, 967. Correlated Characters in Maize Breeding, 1069. Number of Chromosomes and Size of the Nucleus in Some Forms of *Anurhinum*, 1070. A Case of Variations Observed in the Potato in Holland, 1071. Experiments on Crossing Two Varieties of Sunflower (*Helianthus annuus* × *H. agrophyllus* A. Gray) to Obtain a Type Resistant to rust, in Russia, 1072. Cereal Selection in Croatia, Austria Hungary, 1172. Etiolated Cereal Plants, 1272. Two New Seedling Hops of Commercial Promise, 1273.

Platonia insignis, 864.

Plough: Dreux-Brézès Double Flemish Plough, 95. Quickly-ditchable Plough Shares, 672.

Plum: Pollination, 61. Imported into the United States, 308, 388.

Poa spp., 388, 398.

Pollination, *see* Chemistry and Physiology of Plants,

Polygonum linclorion, 44.

Pontianak, 48.

Poplar: Growth of the Black Poplar in Tuscany and its Utilization, 70. The Forest Trees of Canada, *page* 1234.

Poppy, Production in Italy, 737.

Populus *see* Poplar.

Porqueiba serica, 864.

Pororema, 864.

Porto Rico: Cover Crops, 492.

Portugal: Control of the Importation, Manufacture and Sale of Chemical Manures, 17. The International Trade in Feeding Stuffs, *page* 467. The "Miranda" Breed of Cattle, 772. The Cheese Industry, 800. Tobacco-Growing, 986.

Potash, *see* Manure Potash.

Potatoes: The Tyrosinase of the Potato and Sugar Beet, 20. Experiments in Germany on the Effect of the Selection of Seed Potatoes upon the Yield, 38. Experiments in Feeding Milch Cows with Potatoes from Silo, 83. Value in the United States and their Prices at the Farm, 103. Agricultural Dedicating Installations, 219. Mutations of Wild Species of Tuberiferous *Solanum*, 288. Seeds and Plants Imported into the United States, 388. The Carbohydrates of the Leaf and Leaf Stalks of the Potato, 505. Potato Selection by Means of Sexual and Asexual Reproduction, 506. Experiments Carried out in 1915 by the German Station for Potato Cultivation, 513. Growing in Morocco, 609. New Method of Economic Cultivation of the Potato, 639. Change in the Specific Gravity

and in the Starch and Dry Matter content of Potatoes during Storage, 743. Changes Occurring in Potatoes during Storage, 802. The Enzymes Zymase and Carboxylase in the Storage Organs of the Potato, 850. Investigations into the Part Played by the Amylase in Potato Tubers, 851. Cultural, Food and Industrial Value of Some Varieties of Potato Tested in Hungary, 861. Influence of Excess of Water in the Soil, during the Second Half of the Summer, on the Formation of Secondary Potato Tubers and their Starch Content, 862. Comparison between the Effects of Manuring Potatoes with Nitrate of Soda and Sulphate of Ammonia, 863. Experiments in Potato Storage with Sulphur, 916. Comparative Experiments in the Growing of some Varieties of Potato at the Scientific Agricultural Station of Flahult, Sweden, 974. Profit Ensured in Southern Rhodesia by Treating Potatoes with Bordeaux Mixture, 1014. A Case of Variations Observed in the Potato in Holland, 1071. Effect of Sulphur in the Cultivation of the Potato; Experiments in Chili, 1074. The Dessication of Potatoes in Germany, 1216. The Value of Immature Potato Tubers as Seed, 1271. Potato Trials in Guernsey, 1275. Experiments on the Manuring of Potatoes in Germany, 1276.

Poultry: Effect of Pituitary Substance on the Egg Production of the Domestic Fowl, 90. Value of Farm Products in the United States and their Prices at the Farm in 1914. 103. Physiological Relationship between the Yellow Pigment of the Hen and the Xanthophyll of Plants, 207. Measurement of the Winter Cycle in the Hen and the Egg Production of Domestic Poultry, 209.

- Poultry Breeding, 209. Observations on Fowl Cholera, 318. The Control of Contagious Epithelioma in Chickens by Vaccination, 319. Seventeen Years' Selection of a Character Showing Sex-Linked Mendelian Inheritance, 325. Co-operative Poultry Marketing in Saskatchewan, Canada, 347. On the Effects of Feeding Pituitary and Corpus Luteum Substance to Growing Chicks, 423. Laying Competition at Burnley, 425. Report of the Third Egg-Laying Competition Held in Ireland from October 1st, 1914 to August 31st., 1915, 542. Experiments on the Necessity of adding Gravel to Poultry Food, 781. Egg-laying Competition in Australia, 1000. A Study of Constitutional Vigour in Poultry, 1106. Rations for Growing and Fattening Roasters and Capons, 1107. Investigations on the Poisoning of Poultry by Corn Cockle in Hungary, 1191. A Model Poultry Farm in Uruguay, 1199. Poultry Breeding in Tunis; Imported and Native Breeds, 1302. Fecundity in Relation to Stamina, 1303.
- Pressed Pomace, 330.
- Prickly Pear: Yields of Native, in Southern Texas, 58.
- Protium altissimum*, 266.
- Protium heptaphyllum*, 266.
- Prunus brigantia*, 388.
- Prunus Laurocerasus*, 21.
- Pseudotsuga mucronata*: In Canada, page 1236.
- Psoralea corylifolia*, 147.
- Pterocarpus guianensis*, 266.
- Pulse Crops: In Morocco, 609. Some Factors Affecting the Cooking of "Dholl" (*Cajanus indicus*), 973. See also Beans etc.
- Punica Granatum*, 1082.
- Pupunha, 864.
- Purple Heart, 266.
- QUANDONG NUT TREE, 388.
- Queensland: Intensive Cultivation of Pineapples with Citrus in Queensland, 304. Regulation for the Commerce of Fruit in Cases, in Queensland, 346.
- Quedlineja, 498.
- Queule, 498.
- Quila, 498.
- Quillaja Saponaria*, 498.
- Quinchamali, 498.
- Quinoa (*Chenopodium Quinoa*), 5498.
- RABBIT: Cross between a Wild and Domesticated Fur Rabbit in Order to Obtain a Good Fur, 894. Feeding Experiments with Rabbits, 130.
- Rabies, see Hygiene of Live Stock.
- Radishes: Recent Researches on the Chemical and Histological Characters of Radishes Cultivated in the Presence of Sugars, 22.
- Rainfall: Agricultural Meteorology in the United States, 6. The Composition of Rain Water at Montevideo, 7.
- Raisin, see Vine Growing.
- Ranu, 227.
- Rape Cakes, page 477, 961.
- Raphia vinifera*, 2.
- Raspberry, 388.
- Raswat, 1082.
- Refrigeration, see Cold Storage.
- Renet from the Stomach of the Calf, Sheep, and Goat, 233.
- Resin: Some Little-known Resins, 48.
- Rheedia macrophylla*, 864.
- Rhenaniaphosphat, 496.
- Rhipicephalus bursa*, 74.
- Rhipicephalus sanguineus* tick from a dog in Brazil, 187.
- Rice: Ranghino Rice, 34. Tetraphosphates in Rice Lands, 35. Difference of Humidity in Ripe Paddy, 36. The Frequency of Low Temperatures at Vercelli (Italy) and its Effects on the Cultivation of Rice,

141. Bakhar, the Indian Rice Beer Ferment, 227. Cultivation in British Guiana, 266. The Healthiness of Rice Fields in Italy, 267. Yield of Rice in Italy, 267. Ash Composition of Upland Rice at Various Stages of Growth, 276. Japanese Rice "Sekyama" in Italy, 292. The International Trade and Production of Rice Residues, page 473. Green Manuring in India, 387. Lencino Rice in Italy, 399. The Milling of Rice and its Effect upon the Grain, 400. The Milling of Rice and its Mechanical and Chemical Effect upon the Grain, 444. Rice Growing in Italy, 511. Station for Experimental Rice Cultivation, Vercelli, Italy, page 786. Growing in Morocco, 609. Particulars of Rice-growing in Sumatra, 638. Sowing and Transplanting Rice on the "Dapog" Method, Peculiar to some Parts of the Philippines, 749. Early Weeding of Rice Fields, 750. Experiments in Manuring Rice with Burnt Paddy Husks, in Burmah, 751. Vasio Winnowing Machine, 785. The Vasio Paddy Cleaning Machine, Fitted to a Threshing Machine, 786. Testing, Storage and Preparation of Unpolished Rice, 1254.
- Rice Beer, 227.
- Roli, 1082.
- Rose-growing for Essential Oil in Hungary, 303.
- Roumania: The International Trade in Feeding Stuffs, page 467. Agriculture and its Allied Industries in Roumania, 1253.
- Rubber: Amount of Rubber Shipped from Liberian ports, 2. The Smoking of Plantation Rubber, 40. Variation in Plantation Rubber, 47. Quinoco Scrap, 266. On the Action of Alkalies and Acids on Rubber, 1217. See also Rubber Plants, *Hevea*, etc.
- Rubber Plants: Rubber Producing Plants in Southern Italian Somaliland, 45. In British Guiana, 266. In India, 488. Colonial Plants of Economic Importance Cultivated in the Royal Colonial Gardens of Palermo, and Capable of Acclimatisation in Sicily, 499. Manual Experiments with Young Rubber at Kuala Lumpur, F. M. S., 522. In Portuguese Guinea, 956.
- Rubia cordifolia*, 1082.
- Rubus biflorus quinqueflorus*, 388.
- Rural Economics: The Labour Question in South Africa, page 22. The Farmer's Response to Economic Forces, 99. One-Crop Farming Versus Dairying in Wisconsin, 100. Investigations into the Returns of Swiss Agriculture during the Year 1913-14, 101. Investigations of the Institute for Research in Agricultural Economics Oxford, 102. Value of Farm Products in the United States and their Prices at the Farm, 103. Investigation into the Returns of Swiss Beekeeping in 1914, 104. Influence of the Size of the Farm upon the Wages of Labour in the Irrigated Sections of the United States, 221. Regulation of the Association of Spanish Agriculturists for the Purchase, Sale and Leasing of Farms, 222. Labour Cost of Producing Maize in Ohio, 223. Economics of Apple Orchardling in the Pacific Northwest, 224. The Problem of the Sale of Agricultural Products in the United States in Connection with Economy in Farming, 225. A Critical Study of the Methods of Valuation, 226. Managing Alfalfa Pastures in Arizona, 334. Relation of Investment to Farm Profits in the Dairy Farms of Wisconsin, 335. Cultivation of Pistachios in Sicily, 336. Cost of Milk Production in the Counties of York and Somerset.

Further Report, 337. Cash-renting and Share-renting in Missouri, United States, 436. Labour Income in United States, 437, 438. Cultivation of the Bamboo as a Profitable Commercial Enterprise, 439. Cost of Running a Peach Orchard in N. Carolina, U. S. A., 440. The Practical Balance for a Successful Dairy Farm in the United States, 441. Profits and Losses in the Dairy Business of Chemung County, New-York, 442. A Study of the Tenant Systems of Farming in the Yazoo-Mississippi Delta, U. S. A., 552. Some Factors for Success in Farming in the Wisconsin, U. S. A., 553. Farm Valuations for Book-keeping Purposes, 554. Influence of the Size of Farms on their Gross Yield, 678. Increase of Yield of the Soil in the Alpine Regions of Salzburg, Austria, 793. Discussion as to the Method of Effecting Valuations, 905. Cost of Production of the Principal Cereals in European Russia, 906. Wheat Growing on the Share-farming System in the State of Victoria, 907. Strawberry Farming as an Exclusive Cultivation in the South of the United States, 908. Cost of Milk Production in the County of Jefferson, State of New York, U. S. A., 909. Economic Desirability of Tree Planting in Grasslands, 975. Results of Farm Management Demonstration Work in U.S.A., 1010. Crop Yields and Prices and Future Food Supply in the United States, 1011. Time and Method of Tillage on the Yield and Comparative Cost of Production of Wheat in the Pelouse Region of Eastern Washington, 1012. Enquiry into the Most Usual Depreciation Rates for Agricultural Machinery in Minnesota, 1013. Profit Ensured in Southern Rhodesia by Treating Po-

tatoes with Bordeaux Mixture, 1014. The Cost of Food in the Production of Milk, 1095. Machinery Cost of Farm Operations in Western New York, 1110. Farm Management Practice of Chester County, Pa., U. S. A., 1114. Study of a Small Holding at Kirberg, District of Wiesbaden, Germany, 1115. Statistical Report on the Influence of Distance from Market on the Value of Rural Property in Missouri, U. S. A., 1116. The Sources of Farm Profits and Their Relative Importance, 1212. Statistical Researches on the Chief Factors which Influence Farm Profit in Denmark, 1213. The "Mounggharsa", Form of Contract in Northern Africa, 1214. The Possibilities of Increased Crop Production, 1312. Comparative Results Obtained on an Estate in Tuscany where a Farm Worked by the Landlord was Afterwards Run on the Metayage System, 1313. Metayage on an Umbrian Estate (Italy), 1314. Government Share-Farming Experiment in New South Wales, 1315. The Examination of Data in Investigations on Agricultural Economics, 1316. Farm Cost Accounting in the United States, 1317. Fixing the Price of Milk, 1318.

Russia: Laboratory Research in Connection with the Grain Elevators of the Russian State Bank, 111. The International Trade in Feeding Stuffs, page 167. The First 50 Years of the Moscow Higher School of Agriculture, 383. The Effect of Treating Seeds upon the Development of the Plant; Experiments Made in Russia with Wheat, 391. The Bureau of Applied Botany Attached to the Scientific Committee of the Russian Ministry of Agriculture and its First 20 Years of Work (1894-1914), 613. The Cotton

- Plant in the Russian Empire, 641.
 The Fleece of Russian Coarse-woolled Sheep, 668. Cost of Production of the Principal Cereals in European Russia, 906. Experiments on the Cultivation of Meadows on Peat Soils, 1075. The Reclamation of Arid Steppe Soil and of Shifting Sands in the Province of Astrakan, 1164. Manufacture and Co-operative Supply of Agricultural Machinery and Implements, 1205.
- Rye: Value of Farm Products in the United States and their Prices at the Farm in 1914, 103. Comparative Yields of Cereals in Italy, 267. A New Strain of Rye Selected at Svalöf, 287. Production of Rye Bran, page 472. Comparative Tests of 3 Varieties of Rye at Torestorp, Sweden, 529. A Remarkable Cultural Variety of Rye in the Upper Valley of Dora Riparia, Italy, 635. Changes in the Chemical Composition of Rye Seed through the Action of Some Species of *Fusarium*, 742. Injuries to Rye and Wheat Grain Produced by Threshing and Their Consequences, 860.
- SABOEIRO, 864.
Saccharum spontaneum in Binding Moving Sands, 491.
Sacoglottis amazonica, 864.
Sacoglottis Uchi, 864.
 Sacred Bar Flower, 388.
 Saffron: Production in Italy, 757.
 Sainfoin in United States, 388.
 Salvarsan, 660.
 San, 117.
Sandoricum Koetjape, 760.
 Sandy Soil: The Value of *Saccharum spontaneum* in Binding Moving Sands in Sicily, 491. Plants for Binding Dunes, 498, 1164.
Sapium, 266.
Sapindus Saponaria, 864.
 Sappan, 1082.
Sapucaia, 864.
Sarcophaga magnifica, 76.
 Schools of Agriculture, see Agricultural Education.
Secchium edule, 499.
 Seeds, Agricultural: Influence of Pollination on the Production of Red Clover Seed, 26. The Effect of Sorting Grain on the Yield of Wheat, 32. Calcium Hypochlorite as a Seed Sterilizer, 162. Production and Commerce of Forage Plant Seeds in Canada, 163. Comparative Researches on the Dimensions of the Seeds of Clover and Dodder, 290. Testing of Agricultural Seeds in South Australia, 397. Experiments on the Germination of Seeds of Graminae, 398. In Sweden, page 921. Experiments on the Germination Capacity of Beet Seeds, Bohemia, 858. A New Method of Determining the Impurity of Cereal Grains, caused by the Presence of Seeds of *Agrostemma Githago*, 968. Agricultural Value of Impermeable Seeds, 1173. The Seed of *Commelina communis* L. Characteristic of Seed Samples derived from the Maritime Region of Eastern Siberia, 1174. New Dressing Machine for Spherical Grain, 1306.
 Selection, see Plant Breeding.
Septicaemia pluriformis ovium, 77.
Serenoa serotata, 911.
 Sericulture: On the Partial Disinfection of Mulberry Leaves for Silkworms, 91. Development of the Silk Glands in the Chief Races of Silkworms and their First Crosses from the Point of View of the Quality and Length of the Reelable Silk, 211. Sericulture in Egypt, 212. Experiments in Silkworm Rearing in Tripoli, 213. Examination of a Sample of White Oval Cocoons from Kiang-son, China, 214. Orientation of the Mature Silkworm in

- the Act of Spinning its Cocoon, 327. Phototaxy in Silkworms, 328. Parthenogenesis in the Silkworm, 427. Methods for Testing Fumigated Cocoons, 563. Industrial Value of Japanese Yamamai and Sakusan Silks; Experiments in Italy, 564. Experimental Rearing of the Silkworm in "Tilimbars", in Southern Italy, 669. Creation of a School of Silkworm Rearing in the Republic of Colombia, 721. Recent Investigations at the Imperial Institute in London, 841. On the Value of Lime in Relation to Silkworm Nutrition, 890. Study of Sericulture in Madagascar, 891. Experiments in Breeding different Races of Silkworms, at the Silkworm Station of Puerto de Santa Maria (Seville, Spain), 1001. Silk in Indo China, 1157. Recent Investigations at the Imperial Institute, London, 1162. The Work of the Institute for Research on Silkworms at Portici (Italy), 1202. The Work of the Experiment Station for Silkworms at Murcia, Spain, 1910 to 1914, 1203. Wild Silkworms of Africa, 1204.
- Sesbania*, 117, 387.
- Sesame: Sesame Cake as a Feed for Milch Cows, 84. Sesame Trade of Producing Countries, *page 481*. Sesame-growing in Sicily, 644.
- Sewage: Studies of Fish Life and Water Pollution, 92, 516, 557.
- Sheep: Vaccination of Sheep against the Disease *Septicæmia pluriformis ovium*, 77. The Life History of *Nematodirus filicollis* Rud., a Nematode Parasite of the Sheep's Intestine, 78. Sheep Lice, 79. Experiments in Germany on Feeding Lambs with Pine Needles, 87. Value of Farm Products in the United States and their Prices at the Farm in 1914, 103. Features of the Sheep Industries of the United States, New Zealand, and Australia Compared, 204. Improvement of Italian Sheep, 538. Tests on Milking Ewes in Hungary for Yield of Milk and Wool, 539. In Morocco, 609. The Fleece of Russian Coarse-woolled Sheep, 668. The Adaptation of Different Breeds to the Livestock Industry in the United States, 992. Sheep-raising in La Mancha, Spain: Systems of Stock-Breeding Combined With Cultivation, 1101. Mendelism of Short Ears in Sheep, 1197. The Travelling of Flocks in the Dinaric Zone (Eastern Adriatic), 1198.
- Shells, Unexploded in the Field, 674.
- Sicana odorifera*, 388.
- Siderodendron triflorum*, 266.
- Silicate Cotton, 1309.
- Silkworms, *see* Sericulture.
- Silverball, 266.
- Silver Fox Farming in Eastern North America, 94.
- Simaruba officinalis*, 266.
- Simiri, 266.
- Simulium*, 610.
- Siringa, 864.
- Sisal: The Fibre Industry of Mauritius, 229. Acclimatisation in Sicily, 499.
- Skins, *see* Hide.
- Soft Wallaba, 266.
- Soil: In the Viticultural Districts of South Africa, *page 4*. Effect of Temperature on Movement of Water Vapour and Capillary Moisture in Soils, 8. Soil Temperature as Influenced by Cultural Methods, 9. Effect of Fertilizers on the Physical Properties of Hawaiian Soils, 10. The Humification of Plant Constituents, 11. Influence of Growth of Cowpeas upon some Physical, Chemical and Biological Properties of Soil, 142. Relation of Lime to Production of Nitrates and Mineral

- Nitrogen, 145. Soil Gases, 268. The Displacement of Potash and Phosphoric Acid Contained in Certain Rocks by Some Substances Used as Fertilisers, 385. The Effect of Phosphoric Acid Upon the Decomposition of Sugar in the Soil, 490. Physical and Chemical Composition of 2 Soils from the Spanish Gharb (Morocco), 609. The Presence of a Wet-repelling Film on the Surface of Particles of Sand and Mould, 614. The Movement of Soluble Salts with the Soil Moisture, Experiment at Utah, United States, 615. The Alkaline Reaction produced by Acids in Soils, viewed from the Standpoint of Plant Nutrition, 616. Sterilisation of the Soil by Dry Heat, 618. Texture of the Soil in Java, Determined by Mohr's Method of Mechanical Analysis, 619. On the Capacity of White Mustard to Fix Nitrogen and Enrich the Soil, 621. A Dry Heat Steriliser, 677. Soluble Non-Protein Nitrogen of Soil, 724. Influence of Resin and Tannin on the Balance of Nitrogen in the Soil, 725. Adsorption of Potassium by the Soil, 726. Basic Exchange in Soils, 727. The Effect of Elemental Sulphur and Calcium Sulphate on Certain of the Higher and Lower Forms of Plant Life, 729. Method for the Estimation of Hygroscopic Moisture in Soils, 732. The Reaction of Soil and Measurements of Hydrogen-Ion Concentration, 733. On the Origin of Red Soil, 842. Conversion of Soluble Phosphoric Acid into Insoluble Phosphoric Acid in the Soil under the Influence of Physical, Chemical and Biological Factors, 844. Composition of Soils in Portuguese Guinea, 956. Contribution to a Study of the Form in Which Phosphoric Acid occurs in the Soil, 959. Method of Sterilisation and Chloroforming of the Soil in the Study of the Properties of "Tchernoziom", 960. Osmotic Pressure of Soil Moisture and Glassiness of the Grain of "Bielotourka" Wheat, 964. 1257. Measurement of the Surface Forces in Soils, 1059. The Treatment of Peat Beds to Prevent Loss of Nitrogen Due to Bacterial Activity (Germany), 1060. The Chemical Composition of Plants as a Guide to the Fertility of the Soil, 1061. Cause and Nature of Soil Acidity with Special Regard to Colloids and Adsorption, 1163. A Detailed Study of Effects of Climate on Important Properties of Soils, 1256. Somaliland: Rubber-Producing Plants in Southern Italian Somaliland, 45. Sorghum: Value of Sudan Grass (*Andropogon sorghum*) as a Forage Crop, 42. Importance of Thick Seeding in the Production of Milo Sorghum in the San Antonio Region, Texas, 294. Seeds and Plants imported into United States, 388. Breeding of Drought-Resistant Millet and Sorgo in the Great Plains Region of the United States, 514. Sorghum (*Sorghum exiguum* f. *maxima*) in North Africa, 515. Comparative Study of the Root Systems and Leaf Areas of Corn and the Sorghums, 1170. Souari, 266. South Africa: Viticulture, page 1. Grading Maize in Rhodesia, 235. The Problem of Horse Sickness in South Africa, 315. The Production of Beef in South Africa, 915. Spain: Regulation of the Association of Spanish Agriculturists for the Purchase, Sale and Leasing of Farms, 222. The International Trade in Feeding Stuffs, page 467. Sheep-raising in La Mancha, Spain, 1101. The Forage Question in Ara-

- gon, 1181. Spanish Forests and Paper Manufacture, 1188. The Work of the Experiment Station for Silkworms at Murcia, 1203. Olive-Growing and Production in Spain, page 1727.
- Spreader, "Nisco" Manure, 1004.
- Squab Raising in the United States, 326.
- Starch Crops: The Cultivation of Yams in Brazil, 39. *Nelumbium speciosum*, 40. Plant Breeding in Cuba, 396. Plant Indigenous to Chile, 498. Starch Crops in Indo-China, 1157.
- Starch Industry: Cultivation of the Lotus and the Microscopic Examination of its Flours, 40. Waste Waters from Potato-starch Factories in Hungary; the Noxious Action and Purification, 557.
- Stations; Agricultural, see Experimental and Analytical Work.
- Steppes, 1164.
- Sterculia acuminata*, 956.
- Stevia Rebaudiana*, 388.
- Stimulant Plants: In Indo-China, 1157. Investigations about the Dying out of Peppervines in the Dutch East Indies; Pepper-cultivation in Banka, 1286.
- Stipetum gramineum*, 1164.
- Stizolobium*, 493.
- Stock Raising, see Breeding.
- Storing of Agricultural Products: The Spontaneous Heating of a Heap of Oats, 234. Changes occurring in Potatoes during Storage, 802. Experiments in Potato Storage with Sulphur, 916. Investigations into the Part Played by the Amylase in Potato Tubers, 917. Experiments in Preserving Broken Eggs, 918. See also Drying and Ensilage.
- Straw: Chaff-cutter with Curved Blade and Plate for Packing the Straw, 429. Straw Meal and Straw rendered Soluble by Caustic Soda, 779. Mechanism for Clutching and Declutching the Feed Device in Straw Balers, 1209.
- Strawberry: Varieties of Strawberry Tested at the New-York Experiment Station, 408. Strawberry Breeding in the United States, 748. Strawberry Farming as an Exclusive Cultivation in the South of the United States, 908.
- Streptococcus equinus*, 138.
- Strobilanthes flaccidifolius*, 44.
- Strontium: The Influence of Strontium Salts on Wheat, 855.
- Strychnos Nux vomica*, 387.
- Sudan: A Case of Septicæmia in Man produced by *Streptococcus equinus*, 138.
- Sudan grass, 42.
- Sugar Beets: Tyrosinase of the Potato and Sugar Beet, 20. Effect of Removal of the Leaves upon the Sugar Content of Individual Beets, 51. Experiments on Fertilising with Manganese, 52. The Relation between the Sugar Content and the Chemical Characters of the Descendants of the Same Plant of Sugar Beet in the 1st Generation, 160. Experiments made in Denmark on the Seed Time of Sugar Beets, 299. Loss in Tonnage of Sugar Beets by Drying, 300. Effects of Attacks by *Cercospora beticola* on the Composition of Sugar Beets, 301. Experiments on Sugar Beet Growing in South West France, 407. The Enzymes Zymase and Carboxylase in the Storage Organs of the Potato and Sugar Beet, 850. Experiments in Connection with the Assimilation of Potassium and Sodium Ions by the Sugar beet, 856.
- Sugar Cane: Experiments in Covering Cane by Plough and by Spade, 50. Contributions to the Physiology of Stomata in *Saccharum officinarum*; Observations on Transpiration,

156. In British Guiana, 266. Green Manuring in India, 387. Plant Breeding in Cuba, 396. Growing in India, 488. Colonial Plants of Economic Importance Cultivated in the Royal Gardens of Palermo, Italy, 499. Manurial Experiments on Sugar Cane, 1914-1915, 523. Relative Richness of a few Kinds of Sugar-cane in Queensland, Australia, 646. Absorption and Loss of Nitrogen in Java Sugarcane Plantations after Manuring with Sulphate of Ammonia or Nitrates, 647. Description of the Varieties of Sugar Cane under Extensive Cultivation, 865. The Problem of Nitrogenous Manuring of the Sugar Cane in Java (Sulphate of Ammonia or Oil Cakes), Results of 10 Years of Experiments, 866. In Portuguese Guinea, 956. Studies in Indian Sugarcanes, 1283.
- Sugar Industry: The Sugar Industry of the Philippine Islands, 228. Residues of Sugar Industry, *page 486*. A New Yeast Preparation for Use in the Estimation of Crystallizable Sugar by Inversion, 446. The Action of Different Charcoals on Sugar Solutions, and their Effect on the Analyses of Sugar Products, 1321.
- Sulphur: Relation of Sulphur to Soil Fertility, 150. The Effect of Elemental Sulphur and of Calcium Sulphate on Certain Higher and Lower Forms of Plant Life, 729. Experiments in Potato Storage with Sulphur, 916. Sulphur Treatment against the Parasites of Lodged Wheat, 969. Effect of Sulphur in the Cultivation of the Potato, 1074.
- Sumama, 864.
- Sunflowers: Experiments in the Royal Colonial Gardens at Palermo on the Cultivation of Sunflowers Imported from Russia, 520. Experiments on Crossing Two Varieties of Sunflower to obtain a Type Resistant to Rust, 1072.
- Surandanni, 266.
- Sweden: The International Trade in Feeding Stuffs, *page 467*. The Present State of Agriculture in Sweden, *page 921*. "Thule", a Variety of Wheat suited to Central Sweden, 857.
- Sweet Potatoes: In United States, 103. Respiration Experiments with Sweet Potatoes, 282.
- Switzerland: The Breeding of "White Fish" (*Coregonus* spp.), in Switzerland, 93. Investigations into the Returns of Swiss Agriculture, during the Year 1913-1914, 101. Investigation into the Returns of Swiss Beekeeping in 1914, 104. Observations Upon Direct Bearers in the Vaudois Vineyards, 310. The International Trade in Feeding Stuffs, *page 467*. Agriculture in Switzerland, 1158.
- Sword Bean, 492.
- Sylviculture, *see* Forestry.
- Symphonia globulifera*, 864.
- TABEBUIA LONGIPES**, 266.
- Tachardia lacca*, 895.
- Tamarindillo, 493.
- Tanning and Colouring Matters: In Liberia, 2. Experiments on the Physiology of Indigo-yielding Glucosides, 44. Plants Indigenous to Chile which are Cultivated, Capable of Cultivation or Useful, 498. The Tannin Contents of some Queensland Barks, 521. Investigations in Reference to Ienna, 756. The Dyeing Value of Some Indian Dye-Stuffs, 1082.
- Tarota, 147.
- Tartar, 447, 457.
- Tè de burro, 498.
- Tea: Analysis of Tea Grown in Russia, 54. Growing in India, 488. Judging the Quality of Tea from Certain Characters, 648.

- Tephrosia candida* and *T. spp.*, 148, 387, 1082.
- Tesu, 1082.
- Tetilla, 498.
- Theobroma Cacao*, see Cacao.
- Threshing : Injuries to Rye and Wheat Grain produced by Threshing and their Consequences, 860. Dust Explosions and Fires in Grain Separators in the Pacific Northwest, 1208.
- Thuja* : In Canada, page 1322.
- Tillage and Methods of Cultivation : Soil Temperatures as influenced by Cultural Methods, 9. Methods of Soil Sterilisation for Plant Beds and Greenhouses, 146. Improved Summer Fallowing, 386. Cover Crops for Porto Rico, 492. The Influence of Relative Area in Intertilled and Other Classes of Crops on Crop Yield, 1062.
- Timber : Timber and Firewood yielded by Black Poplars at various Altitudes, 70. Forest Resources of British Guiana, 266. Strength Tests of Structural Timbers Treated by Commercial Wood Preserving Processes, 341. In Morocco, 609. Value of Eucalyptus Wood as Fuel, 657. Nutritive Value and Digestibility of Wood, 882. New Method of Fireproofing Wood, 902. Lorry for Transporting Timber in Long Lengths, 1308.
- Timothy : Studies on the Timothy Plant, 280, 398, 1077.
- Tobacco : State Control of Tobacco Growing in Montenegro, 56. Data Collected during a visit to Besoeke (Java), on Tobacco Growing, 175. Method of Drying of Kentucky Tobacco, 302. Green Manuring in India, 387. Methods of Cultivation in India, 488. Waste of Tobacco Ash, 738. Nyassaland Tobacco, 841. A Pre-fermentation of Tobacco in Special Stacks, 867. Investigations into the Combustibility of Tobacco, 868. Plant Breeding in Java, 967. Tobacco-Growing in Portugal, 986. Barium in Tobacco and other Plants, 1171. Tobacco Growing in the Illyrian Region, 1288. New Varieties of Italian Tobacco, Resistant to *Thielavia basicola*, 1289. Experiments on Tobacco Fermentation in Java, 1290.
- Tomatoes : The Presence of Copper in Tomatoes and Tomato-Preserves, 502. How to Obtain an Early and Abundant Crop of Tomatoes, 652. Tomato Crop : Average Weight per Plant in France, 1084.
- Tonkin Bean, 266.
- Towaronero, 266.
- Trade : The Problem of the Sale of Agricultural Products in the United States, in Connection with Economy in Farming, 225. The Fibre Industry of Mauritius, 229. Grading Maize in Rhodesia, 235. Cantaloupe Marketing in the Larger Cities with Car-Lot Supply, 1914, 236. Peach Supply and Distribution, U. S., 237. New York State's Apple Auctions, 345. Regulations for the Commerce of Fruit in Cases, Queensland, 346. Co-operative Poultry Marketing in Saskatchewan, 347. The International Trade in Feeding Stuffs, page 467. Almond Growing and Trade in California, 456. Trade Standard for the Sale of Wine Lees and Tartar, 457. The Sale of Eggs and Poultry in Massachusetts, 458. Decree regulating Butter Manufacture and Trade in Brazil, 565. The Measures to be Adopted for Preventing Unfair Competition in the Cheese Trade, 801. Sale of Cattle through the Agency of Co-operative Shipping Associations in the United States, 919. Control of the Sale of Skim Milk, 910. Farmer's Elevators in Minnesota, United

- States of America, 1026. Disadvantage of Selling Cotton in the Seed, 1122. Tendency Towards a Levelling of Prices for Fresh and Frozen Meat, 1123.
- Tree-felling by Machinery, 550.
- Triaca, 498.
- Trichodectes sphaerocephalus*, 79.
- Tricholaena rosea* ("Natal Grass") a Forage Plant for Hot Countries, 979.
- Tripoli: Experiments in Silkworm Rearing, 213. The Royal Institute for Agricultural Experiments, Tripoli, 1161.
- Trypan-blue, 75.
- Tshizimboti, 48.
- Tsuga*: In Canada, page 1320.
- Tucuma, 864.
- Tufai, 48.
- Tun, 1082.
- Tunis: The International Trade in Feeding Stuffs, page 467. Conditions under which the Cold Storage Industry will Render the greatest Services to the Vine-Growing Industry in Tunis, 1015.
- Turmeric, 1082.
- Tyrosinase of the Potato and Sugar-Beet, 20.
- UCUUBA, 864.
- Ugni Molinae*, 498.
- Umo, 498.
- Umary, 864.
- United States: Frost Protection for Fruit and Vegetables, 5. Agricultural Meteorology in the United States, 6. Silver Fox Farming in Eastern North America, 94. One-Crop Farming Versus Dairying in Wisconsin, 100. Value of Farm Products in the United States and their Prices at the Farm in 1914, 103. Relation between Humidity and Yield of Winter Wheat in Western Kansas, 140. Native Pasture Grasses, 170. Effects of Tick Eradication on the Cattle Industry of the Southern Areas, 193. Dairy Breed Statistics, 203. Features of the Sheep Industries of the United States, New Zealand, and Australia Compared, 204. New Plans of U. S. Department of Agriculture concerning Farm Machinery and Implements, 216. Influence of the Size of the Farm upon the Wages of Labour in the Irrigated Sections of the United States, 221. Labour Cost of Producing Maize in Ohio, 223. Economics of Apple Orcharding in the Pacific Northwest, 224. The Problem of the Sale of Agricultural Products in the United States in Connection with Economy in Farming, 225. The Canned Fruits Industry in California, 230. Cantaloupe Marketing in the Larger Cities with Car-Lot Supply, 1914, 236. Peach Supply and Distribution, 237. Soils of Massachusetts and Connecticut, with Especial Reference to Apples and Peaches, 307. Report on New or Noteworthy Fruits by the New York Agricultural Experiment Station, Geneva, N. Y., 308. Testing Grape Varieties, 311. Squab Raising, 326. Managing Alfalfa Pastures in Arizona, 334. Relation of Investment to Farm Profits in the Dairy Farms of Wisconsin, 335. New York State's Apple Auctions, 345. The International Trade in Feeding Stuffs, page 467. Production of Cottonseed Cakes and Meal in the United States, page 475. Seeds and Plants imported into United States, 1913, 388. Hourly Transpiration on Clear Days as Determined by Cyclic Environmental Factors, Colorado, 392. Vine-Growing in California, 412. A New Type of Cattle for Alaska, 419. Cash-renting and Share-renting in Mis-

souri, 436. Labour Income in Minnesota, 437. Advantage of Diversity in Farming Operations in the Central Wheat Belt in Kansas, 438. Cost of Running a Peach Orchard in North Carolina, 440. The Practical Balance Balance for a Successful Dairy Farm in the United States, 441. Profits and Loss in the Dairy Business of Chemung County, New York, 442. Almond Growing and Trade in California, 456. The Sale of Eggs and Poultry in Massachusetts under Guarantee, 458. A Study of the Tenant Systems of Farming in the Yazoo-Mississippi Delta, 552. Some Factors for Success in Farming in Wisconsin, 553. An Experimental Study of Pellagra in Mississippi, 611. Requirements for Advanced Registry of Cattle Breeds in the United States, 666. Strawberry Breeding, 748. List of Champion Cows of the 5 Principal Dairy Breeds of the United States in 1915, 776. The Wheats of the State of Washington, 859. Raisin Production in the United States, 874. Strawberry Farming as an Exclusive Cultivation in the South of the United States, 908. Cost of Milk Production in the Country of Jefferson, 909. Monograph on a Small Dairy Farm in Illinois, 910. Sale of Cattle through the Agency of Co-operative Shipping Associations in the United States, 919. Oat-growing in the State of Washington, 971. The Green Pea as a Forage Plant in North America, 982. Cultivation and Selection of *Vitis rotundifolia* and *V. Munsoniana* (Muscadine Grapes), 987. The Adaptation of Different Breeds to the Livestock Industry, 992. Horse Breeding in Minnesota, 993. Progress of the Holstein Breed in the United Sta-

tes, 995. Production of Agricultural Machinery in the United States, 1003. Results of Farm Management Demonstration Work in U. S. A., 1010. Crop Yields and Prices and Future Food Supply in the United States, 1011. Time and Method of Tillage on the yield and Comparative Cost of Production of Wheat in the Pelouse Region of Eastern Washington, 1012. Enquiry into the most usual Depreciation Rates for Agricultural Machinery in Minnesota, 1013. Farmer's Elevators in Minnesota, 1026. California Grapefruit, 1085. Stallion Service, 1091. Machinery Cost of Farm Operations in Western New York, 1110. Statistical Report on the Influence of Distance from Market on the Value of Rural Property in Missouri, 1116. The Times to Seed Wheat in Kansas, 1179. Reclaiming the Everglades of Florida, 1259.

Urena lobata, 172.

Uruguay: The Composition of Rain Water at Montevideo, 7. Dairying in Uruguay, page 629. Experiments in Growing *Arachis hypogaea* in Eastern Uruguay, 519. A Study of the Problem of Forage Production in Uruguay, dealing with the use of Artificial Inoculation in the Lucerne Fields, 1180. A Model Poultry Farm, 1199.

Utiat, 227.

VACCINIUM MACROCARPUS, 109.

Vernonia cinerea, 147.

Vigna Caljang, 142, 387, 493.

Vine Growing: Viticulture in South Africa, page 1. Studies and Observations on Direct Producers in Poitou, France, 68. Baco's Vine Hybrids in Charente, France, 69. Autolysis of Grapes, 105. Diagnostic Value of Grape Pips, 184. Hybrid

Self-Bearer Vines, 185. Grapes in United States, 308. Observations Upon Direct Bearers in the Vaudois Vineyards (Switzerland), 310. Testing Grape Varieties in the Vinifera Regions of the United States, 311. Plants imported into United States, 388. Plant Breeding in Cuba, 396. Experiments in Italy on the Best Time for Pruning the Vine, 410. Observations on the Cultivation of Direct Bearers in Savoy (France), in 1915, 411. Vine Growing in California, 412. Experiments in Manuring Vines with Chemical Fertilisers, Carried out in 1915 by the National Society of Agriculturists of Hungary, 527. Hybrid Direct Bearers in Italy, 528, 529. Raisin Making in California, 558. Vine Growing in Morocco, 609. Direct-bearing Hybrids in the Regions of Côtes du Rhône, France, in 1915, 762. Observations on Direct Bearers at the Royal Oenological School of Conegliano, Italy, 763. An Interesting Problem in Connection with Radical Pruning, 764. Raisin Production in the United States, 874. Cultivation and Selection of *Vitis rotundifolia* and *V. Munsoniana* (Muscadine Grapes) in the United States, 987. Selection and hybridisation of American Vines, in Italy, page 1393. Vine-growing in Switzerland, 1158. Effect of Drought on the Size of Grapes, 1187. Vine Growing at Benghazi, Tripoli, 1293. *avira*, 498. *ola Bicuskyba*, 864. *oudzeia subterranea*, 1162. *schisia gummitera*, 985. *oquis*, 198.

VALLABA, 266.
Valnut: Imported into United States, 388. Plant Breeding in Cuba, 396.

A Fruit of *Juglans regia* Containing a Kernel of *Corylus Avellana*, 508. In Canada, page 1240.

Water: The Question of the Toxicity of Distilled Water, 154. Water as a Factor of Production in Leguminosae, 155. Effect of Frequent Cutting on the Water Requirement of Alfalfa, 166. The Oxygen Consuming Powers of Natural Waters, 1159.

Watermelon, 1162.

Water, orange flower, 448.

Wax: The Viscosity of Beewax and the Substances used for its Adulteration, 682.

West Africa: Two Cereals of Upper Guinea, 37. Contribution to the Study of Trypanosomiasis in Animals in Angola, West Africa, 189.

Wheat: The Effect of Sorting Grain on the Yield of Wheat, 32. Value of Farm Products in the United States and their Prices, 103. Effect of the Density of a Wheat upon its Flour Yield, 106. Relation between Humidity and Yield of Winter Wheat in Western Kansas, United States, 140. On the Inheritance of Some Characters in Wheat, 159. Selection of Wheats for Spring Sowing, 164. Wheatgrowing Competitions in the Roman Campagna in 1914, 165. Comparative Yields of Cereals in Italy, 267. Experiments in the Improvement of Wheat at Swalöf, Sweden, 286. Report of the Committee on Home Grown Wheat 291. Advantage of Diversity in Farming Operations in the Central Wheat Belt in Kansas, U. S. A., 438. In India, 488. The Composition of Indian Wheats, 509. Spring Wheat sowing in France: Manitoba Wheats and Rieti Wheat, 510. Selection of Cereals in Italy, page 777. Manganese in Wheat, 625. Wheat Varieties in Siberia, 633. Growing Mani-

- toba Wheat in the Haute-Marne, France, 634. Thule, a Variety of Wheat suited to Central Sweden, 857. The Wheats of the State of Washington, U. S. A., 859. Injuries to Rye and Wheat Grain produced by Threshing and their Consequences, 860. Wheat-growing on the Share-Farming System in the States of Victoria, Australia; Results obtained in 1915, 907. Osmotic Pressure of Soil Moisture and Glassiness of the Grain of Biélotourka Wheat, 964. Liquid Manure with Addition of Sulphuric Acid as Spring Manure and Means of Control against Weeds and Lodging of Wheat. Sulphur Treatment against the Parasites of Lodged Wheat, 969. Investigations into Factors affecting the Handling of Wheat Hay, including a Study of the Digestibility, 977. Time and Method of Tillage on the Yield and Comparative Cost of Production of Wheat in the Pelouse Region of Eastern Washington, 1012. Results obtained with the New Wheat Carlotto Strampelli in the Regional Experimental Fields in Italy, 1175. Hybrid Wheats, Gentil rosso and Noé, obtained by Professor Passerini, 1176. Two Good Varieties of Italian Wheat, Gentil rosso and Gentil bianco, 1177. Seeding Experiments with Single Grains of Wheat Wheat, 1178. The Time to Seed Wheat in Kansas, 1179. The Relationship between the Osmotic Pressure of the Soil Solution and the Growth of Wheat, 1257.
- Wild Indigo, 147.
- Wine Making: Viticulture in South Africa, *page* 1. The Autolysis of Grapes, 105. Method of Testing Musts, 443. Cold Extraction of Cream of Tartar from Grape Marcs by Camniaggi's Method, 447. Trade Standard for the Sale of Wine Lees and Tartar, 457. A Practical Method for Removing the Strawberry Flavour from Noah-grape Wines, 555. Table Wines and Blending Wines of Sicily, 794. The Wine of Grapes treated with Arsenates, 795. Conditions under which the Cold Storage Industry will Render the Greatest Services to the Vine-growing Industry in Tunisia, 1015. Methods of Detecting the Admixture of Cider to Wine, 1016. Sulphurous Acid in Chemical Combination in Must and Wines, 1215. Lead Arsenate in Vine Culture, 1319.
- Wood, *see* Timber and Forestry.
- Wool: Value of Farm Products in the United States, 103. Australasia's Wool Clip, 112. Features of the Sheep Industries of the United States, New Zealand, and Australia compared, 204. Tests on Milking Ewes in Hungary for Yield of Milk and Wool, 539. Spanish Wools, 562. The Pleece of Russian Coarse woolled Sheep, 668. Fine and Coarse Wool of Russian Sheep, 681. The World's Sheep and their Wool with Special Reference to the Production in Australasia, 1222.
- Wrightia tinctoria* and *W. tomentosa*, 44
- XANTHOPHYLL OF PLANTS, 207.
- YAMS: Cultivation in Brazil, 39.
- Yerba rosaria, 492.
- Yoghourt, 454.
- ZACATON, 108.
- Zarzabacoa galana, 492.
- Zebra: Observations on the Skulls of Hybrids between Wild and Domestic Horses and Cattle, 200.
- Zizyphus* spp., *see* Jujube.
- Zucca centenaria, 499.

B)-INDEX OF AUTHORS.

- ABELLA, ARTURO, *page* 629.
 aqua, C., 328, 1202.
 ametz, 1300.
 idur, Rahman Khan, Howard Al-
 bert, Howard Gabriel L. C., 512.
 gnoletti, Giuseppe, 662.
 guilar, R. H., Heise George W., 1159.
 guzzi, Angelo and Cosco, Giuseppe.
 661.
 ita, A., 1263.
 ihani, Giuseppe, 905.
 ilan, R. G., 147.
 olison, H. O., 886.
 incker, F., 1182.
 ndererson, W. S., 321.
 ndrasovszky, J., 184.
 André, G., 385, 745.
 Andrew, H. W., 397.
 Andriik, K. and Urban, J., 160.
 Anrep, A., 1323.
 Apostol, Silverio, 749.
 Aquatias, P., 677.
 Archibald, E. S., Dymond, J. R. and
 Elford, F. C., 770.
 Arkhangelskij, M., 636, 862.
 Arnd, T., 1060, 1258.
 rtis, B., Maxwell, H. L., 1171.
 aston, B. C. and Reakes, C. J., 316.
 Astor, A., 782.
 Amiot, J., 288.
 Ayers, S. Henry, 449.
 Ayers, Henry and Taylor George R.,
 1113.
 BADERMANN, 991.
 Baillache, Gabriel and Rivière, Gust-
 ave, 275.
 Bakke, A. L., 23.
 Baldacci, Antonio, 1288.
 Bamber, M. K. and Corlett, D. S., 55.
 Barnes, E., Griebel, C., 911.
 Bancroft, C. K. and Harrison, J. B.,
 266, 402.
 Barber, C. A., 1283.
 Barker, B. T. P. and Gimingham, C. T.
 339.
 Barthel, Chr. 110.
 Bartlett, H. H. and True R. H., 279.
 Bartolucci, A., 777.
 Bartschi, J. and Haldemann, M., 801.
 Bassi, E., 652.
 Battandier, J. A., 405.
 Beals, Edward A., 5.
 Beavers, J. C., 889.
 Bedford and Pickering, S., 759.
 Beegle, F. M., Forbes, E. B., Whittier,
 A. C., Fritz, C. M., Collison, R. C.
 Woods, H. S., Knudsen, C. W., 1088.
 Beegle, F. M., Forbes, E. B., Fritz, C.
 M., Morgan, L. E., Rhue, S. N., 998.
 Beger, Morgen, Ohlmer, Michalowski,
 881.
 Beguet, M., Sergent, Edm., Lhéritier,
 A., Boquet, A., 75.
 Belling, John, 394.
 Bender, Emile, 1115.
 Benedict, Harris M., 965.
 Benincasa, M., 302, 1289.
 Bennett, E. G., 1193.
 Bentley, C. H., 230.
 Bentley, H. W. and Hart, E. B., 81.
 Reuton, sir John, 12.
 Berg, W. N., 455.
 Bergès, Pedro, 1021.

- Bernatsky, Jenö, 198, 624.
 Bertoni, Guillermo Tell, 296.
 Besana, C., 233, 1220.
 Betts, H. L. and Newlin, J. A., 341.
 Bidwell, G. M., Griffiths, D. and Goodrich, C. E., 170.
 Biffen, R. H., 164.
 Bill, A. J., 910.
 Billings, G. A., Dixow, H. M., Spillmann, W. J., 1114.
 Billwiller, Dr., 88.
 Bimbi, Paolo, 879.
 Blanck, E., 199.
 Blin, Henri, 1324.
 Bliss, J. R. R., Lee, C. B., Snyder, W. P., 510.
 Bliss, K. K., Lee, C. B., 537.
 Bochiechio, N., 637, 1318.
 Bodnár, J., 850, 851.
 Boeger, E. A., Goldenweiser, E. A., 552.
 Bonnardot., 1080.
 Boquet, A., Sergent, Edm., L'héritier, A. and Beguet M., 75.
 Bordas, F., 920.
 Bordiga, Oreste, 267.
 Borgeaud, A., 1158.
 Borzi, A., 491.
 Bottomley, W. B., 849.
 Boulanger, C. L., 78.
 Bouret, D., 1158.
 Bouyoucos, C. J., 8.
 Boyer, Jacques, 66, 674.
 Brand, C. J., Scofield, T. H., Cook, O. T., Swingle, W. J., 518.
 Brand, Ch. S. and Merrill, S. L., 108.
 Brenier, Henri, 1157.
 Breslavetz, L., 1070.
 Brew, James D., 451.
 Bridel, Marc, 21.
 Briggs, Robert R., 5.
 Briggs, L. G. and Shantz, H. L., 392.
 Briggs, Lyman L. and Shantz, H. L., 166.
 Brini, F., 1313.
 Brodie, D. A., 1062.
 Brodrick-Pittard, N. A., 342.
 Broomwell, A. W. and Wise, F. B., 444.
 Brown, Edward, 425.
 Brown, L. C., 404.
 Brünnich, J. C., Jefferis, A. T., 521.
 Bucci, Pietro, 211, 669.
 Buckner, G. D., 285.
 Bull, C. P., 293.
 Burnett, E. A., Snyder, W. P., 997.
 Burns, W. and Prayag, S. H., 183.
 Burrell, B. A., 738.
 Burri, Roh. and Hohl Joh., 450, 1022.
 Buss, W. J., 1107.
 Bussano, Gerardo, 188.
 Bussard, 972.
 Buzas, Gy., 781.
 Byers, Charles Alma, 218.
 CADORET, ARTHUR, 639.
 Cadwell, W. H., 888.
 Caldwell, W. D., 344.
 Call, L. E., Salmon S. C., Cunningham, C. C., 1179.
 Call, L. E. and Stallied, A. L., 140.
 Cameron, F. K., 16.
 Campbell, L. E., 298.
 Camus, E. G., 1080.
 Camus, L., 1160.
 Cannon, W. A., 283.
 Cardon, P. V. and Saunders, D. A., 297.
 Carini, A., 91.
 Carmth, F. A. and Withers, W. A., 8.
 Carpano, Matteo, 74, 190, 192.
 Carpenter Ford, A., 5.
 Carrero, J. Q. and Gile, P. L., 276.
 Cartier, F., 411.
 Carver, Dr. T. N., 225.
 Catalano, G., 644.
 Cauda, A., 389, 617.
 Cerriana, C. F., 635.
 Chalmers, Albert J. and Haddah, George, 138.
 Champlin, Manlevy, Hume, A. N., 1278.
 Chapin, Robert M., 313.
 Chapin, William, S., 24.
 Chasset, Louis, 869.
 Chenevard, W., 1302.
 Chevallier, H., 445.
 Chevallier, J. B., Oldershaw, A. W., 1099.
 Chieri, C., 799.
 Chierici, Remo, 226.

- Chittenden, F. V., 497.
 Christensen, H. R., 843.
 Chubbuck, M., 442.
 Ciapetti, Gino, 1006.
 Clark, G. H., 163.
 Clark, Lewis, Neilson, 90.
 Clausmann, P. and Gautier, A., 628.
 Clerk, Florence L., 179.
 Cline, Joseph L., 5.
 Clothier, R. W., 334.
 Coceani, B., 529.
 Coe, H. S. and Westgate, J. M., 41.
 Coelho de Souza, William, W., 43.
 Cole, J. R. D., 322.
 Collins, G. N., 1869.
 Collison, R. C., Fritz, C. M., Whittier
 A. C., Beegle, F. M., Forbes, E. B.,
 Woods, H. S., Knudsen, C. W., 1038.
 Collum, E. V. and Davis, Marguerite,
 195.
 Colombo, Guido, 503.
 Cominotti, Luigi, 533.
 Compton, Arthur, 1268.
 Cook, O. F., Scofield, T. H., Brand, C.
 J., Swingle, W. J., 518.
 Corlett, D. S., and Bamber, M. K.,
 55.
 Cortesi, Fabrizio, 757.
 Cortesi, F. and Tommasi, G., 750.
 Corro, Giuseppe and Aguzzi, Angelo,
 561.
 Corville, Frederick V., 271.
 Cramer, I. P. J. L., 1284.
 Cranfield, H. T. and Taylor, Margaret,
 G. D., 85.
 Crawford, J. T., 722.
 Creswell, Charles F., 1122.
 Crocker, B. and Grover, G. F., 277.
 Crother, Charles., 1301.
 Crother, Ch., Ruston, A. G., 1005.
 Cziz, Shepperd, 772.
 Cziz, Shepperd, Charles J., 98.
 Cunha, Almeida and Sá, Carlos, 532.
 Cunningham, C. C., Salmon, S. C.,
 Call, L. E., 1179.
 Cusmano, A., Liberi, G., Marsiglia, T.,
 Zay, C., 502.
 Cuscolo, Alessandro, 181.
 DA COSTA, LIMA R., 187.
 Daish, A. G., Davis, W. A., Sawyer,
 G. C., 505.
 Dalla Torre, Giulio, 453.
 Dallimore, W., 655.
 Dalmaso, G., 410, 763, 764.
 Daniel, L., 508.
 Dannfelt, H. Juhlin, *page 921*.
 Davies, C. J., 1305.
 Davis, Marguerite and Mc Collum, E.
 V., 195, 231.
 Davis, W. A., Daish, A. G. e Sawyer,
 G. C., 505.
 Dean, William S., 912.
 Dearborn, N., 94.
 Dearing, Charles, Husmann George,
 C., 987.
 De Cabaussel, P., 1206.
 Dechevoj, M., 1205.
 De Choin, 1092.
 Dedijer, Jevto, 1108.
 De Fontgalland, A., 1207.
 Degaus, C., 555.
 Degen, A., 1191.
 De Gregorio, Rocasolano Antonio, 962.
 De Jong, Dr. A. W. K., 173, 1265, 1287.
 De la Barbe, Gaston, 1080.
 De Lacerda, Pizzarro, Agostinho José,
 Freire, 996.
 De Landgraf, Jean, *page 180*.
 Delle, E., 1016.
 De Moraes, Paschoak, 65.
 Demoussy, E., 19, 627.
 Demuth, George S., and Phillips E. F.,
 210.
 Dental, J. B., 524.
 De Rosa, Antonio, 1177.
 Desmoulin, Am., 309.
 Desmoulin, A. and Villard, V., 762.
 Dessaisaix, R., 904.
 De Ulhoa Cintra, Jayme., 657.
 Deuss, J. J. B., 648.
 Devaux, Henry, 614, 744.
 De Verteuil, J., 523.
 De Vries, O., 175, 867, 868, 1290.
 Didlake, Mary and Garman, H., 501.
 Dietrich, W. Völtz, W. and Jantzson, H.,
 83.

- Dillman, A. C., 514.
Di Mai, Clelia, 176.
Diserens, E. J., 1158.
Dixon, H. M., Spilmann, W. J., Billings, G. A., 1114.
Dobbs, A. C., 387.
Doty, S. W., Hall, L. D., 919.
Düggeli, Max, 1023.
Dunncliff, A. A. Junior, 1303.
Duport, J. L., 895.
Dykes, W. R., 161.
Dymond, J. R., Archibald, F. S. and Elford, F. C., 770.

EARLE, F. S. and POPENOE, WILSON, 396.
Eaton, B. J., 46, 47, 49, 1217.
Eaton, B. J. and Grantham, J., 406.
Eber, A., 1294.
Eberhardt, Cake, Gerlach, Schneidewind and Haselhoff, 149.
Eckles, C. H., 1094.
Edin, Harold, 774.
Edwards, C. E., 792.
Egorow, M. A., 593.
Eichelbaum, Georg., 918.
Eichhorn, Adolf, 312.
Elford, F. C., Dymond, J. R. and Archibald, F. S., 770.
Elorricia, Ottavio, 1188.
Elser, W. L. and Goddard, L. H., 223.
Eredia, F., 384.

FABRIS, UGO, 682.
Faes, H., 310.
Fallada, O. and Greisenegger, 52.
Fascetti, G., 1220.
Faville, A. D., 1103.
Fawcett, Waldon, 216.
Fehlmann, J. W., 329.
Fehlmann, J. W. and Kaiser-Vetsch, L., 428.
Ferreira, Bento, 642.
Flaksberger, C., 633.
Fletcher, W. F., 758, 872.
Fominykh, V. A., 1075.
Foncin, Mlle Myrien, 1184.
Forbes, E. B., Beegle, F. M., Fritz, C. M., Morgan, I. E., Rhue, S. N., 998.
Forbes, E. B., Beegle, F. M., Whittier, A. C., Fritz, C. M., Collison, R. C., Woods, H. S., Knudsen, C. W., 1088.
Forssell, Gerhardt, 531.
Poth, H., 659.
Fouqué, Henri, 556.
Franklin, H. J., 409.
Fred, F. B., 144, 278, 728, 734.
Free, E. R., 139.
Freire, José Agostinho, De Iacerda, Pizarro, 996.
Fremiet, Victor, 111.
Frey, J., 1158.
Frey, P., 988.
Fritz, C. M., Forbes, E. B., Beegle, F. M., Morgan, I. E., Rue S. N., 998.
Fritz, C. M., Whittier, A. C., Beegle, F. M., Forbes, E. B., Collison, R. C., Woods, H. S., Knudsen, C. W., 1088.
Froggatt, W. W., 1295.

GAIL, A. D. SHERMANN, W. and YEAW F. L., 236.
Gaines, E. F., Schafer, E. G., 859.
Garman, H. and Didlake, Mary, 501.
Garrad, G. H., 337.
Garrigon, P., 735.
Gassner, 153.
Gaudot, G., 395.
Gautier, A. and Clausmann, P., 628.
Geerts, J. M., 866, 1264.
Gerlach, 272, 773, 916.
Gerlach, Cake, Schneidewind, Haselhoff and Eberhardt, 149.
Giglioli, Italo., 969.
Gilchrist, J., 897.
Gile, P. L. and Carrero, J. O., 276.
Gillespie, L. J., 733.
Giltner, W., Langworthy, H. V., 730.
Gimingham, C. T. and Barker, B. T., 339.
Girardi, G., 439.
Giuliani, R., 84.
Given, D. H. C., 282.
Gloess, P., 1261.
Godd, G., 546.

- Goddard, L. H., 1010.
 Goddard, L. H. and Elser, W. J., 223.
 Gola, G., 18.
 Goldenweiser, E. A., Boeger, R. A., 552.
 Gonnermann, M., 20.
 Goodrich, C. E., Griffiths D. and Bidwell, G. M., 170.
 Gorini, Costantino, 109, 232, 560, 1098.
 Gorter, K., Swart N. L., 1282.
 Gouin, André, 1299.
 Grantham, J., 47.
 Grantham, J. and Eaton, B. J., 406.
 Green, S. N. and Green W. J., 1083.
 Gregory, C. T., 848.
 Greisenegger and Fallada, 52.
 Griebel, C., Bames, E., 911.
 Griffiths, F., 58.
 Griffiths, D., Bidwell, G. M. and Goodrich, C. E., 170.
 Grivostava, I. P., 1082.
 Gromow, J., 500.
 Grossfeld, J., 1223.
 Grover, G. F. and Crocker, B., 277.
 Guillin, 961.
 Guan, R. V. and Otis, H., 1212.
 Guseletto, A., 650.
 Guthrie, E. S., 914.
 Guthrie, E. C., Supplee, G. C., 913.
 Gayot René, 448.
 HABERLAUDT, G., 882.
 Haddah, George and Chalmers, Albert J., 138.
 Haempel, O., 544.
 Hager, G., Kern J., 1168.
 Haig, W. D., 732.
 Haldemann, M. and Bartschi, J., 801.
 Hall, L. D., Doty S. W., 910.
 Halmi, J., 557.
 Hahnan, E. T., 194.
 Hamaker, C. M., 615.
 Hamza, Ernst, 793.
 Hansen and Mez., 541.
 Hansson, Nils, 1192.
 Harrington, George T., 1173.
 Harris, F. S., 615.
 Harrison, J. B. and Bancroft, C. K., 256, 402.
 Hart, E. B. and Bentley, H. W., 81.
 Hart, E. B., Stenbock, H., Nelson V. E., 196.
 Hart, I. A., 1000.
 Harvey, E. M., 158.
 Haselhoff, Take, Gerlach, Schneidewind and Eberhardt, 149.
 Hasselbring, Heinrich and Hawkins, L. A., 282, 393.
 Hastings, Stephen H., 294.
 Hatano, Iwarichi, 890.
 Haupt, W. and Stutzer, A., 87.
 Hawkins, L. A. Hasselbring, Heinrich, 282, 393.
 Hayden, C. C., 994.
 Headden, W. P., 625.
 Hedrick, U. P., 308, 525, 526.
 Heim, F., 1118.
 Heinrich, J. O., 1064.
 Heinrich, M., 290.
 Heise, George W., Aguilar, R. H., 1159.
 Hendrickson, Norman, Hicks W. B., Jenkins, M. K., Stoking, W. A., Ross, S. H., St. John, E. A., 1224.
 Heralek, J., 215.
 Heriöt, E. M., 15.
 Herke, S., 155, 490.
 Hibbard, R. P., 154.
 Hicks, W. B., Jenkins, M. K., Stoking, W. A., Ross, S. H., St. John, E. A. Hendrickson, Norman, Hicks, W. B., 1224.
 Hildebrandt, F. M., Mc Call, A. G. and Johnston E. S., 726.
 Hines, C. W., 228.
 Hink, August, 201.
 Hittier, H., 386.
 Hjalmar, Von Feilitzen, 629, 639, 746, 747, 974, 984.
 Hodsoll, H. E. P., 493.
 Hoffmann, J. F., 234.
 Hohl, Joh. and Burri Rob., 450, 1022.
 Hohn, Alex., 915.
 Holmes, A. D., Langworthy, C. P., 561, 1121.
 Holtz, H. F., Thorn, C. C., 1012.
 Honing, J. A., 875.
 Hopper, H. A., Robertson, F. E., 909.

- Hover, J. M., 989.
 Howard, Albert, 1065.
 Howard, A. and Howard, G. I. C., 159.
 Howard Albert, Howard, Gabriel, L. C., Addur Rahman Khan, 512.
 Howard Gabriel, L. C., Addur Rahman Khan, Howard Albert, 512.
 Howe, G. H., 177, 306.
 Hughes, H. D., 632.
 Humbert, J. G. and Selby, A. D., 146.
 Hume, A. N., Champlin Manleyv, 1278.
 Humphreys, W. J., 5.
 Husmann Georges, C., 311, 874.
 Husmann George, C., Dearing Charles, 987.
 Hutchinson Henry, P., 1274.
 Hutchinson, R. H., 489.
 Hutchinson, C. M. and Ram Ayyar, C. S., 227.
 Hyslop, G. L., 1311.

 INGVAR JORGENSEN, 1260.
 Institut International d'agriculture, *page 467*.
 Issatchenko, B. L., 1174, 1267.
 Iuferev, V. I., 641.
 Ivanov, S. L., 626, 651.

 JACOB, GEORGES, 212.
 Janata, A., 968.
 Jantzon, H., Völtz, W. and Dietrich W., 83.
 Jaques, G., 880.
 Jefferis, A. T., Brünich, J. C., 521.
 Jegorov, M. A., 959.
 Jenkin, T. J., Stapledon, R. G., 1277.
 Jenkins, M. K., Stoking, W. A., Ross, S. H., St John, E. A., Hendrickson Norman, Hicks W. B., 1224.
 Jenks, Albert Ernest, 771.
 Jeswiet, J., 865.
 Jobleins-Pomeroy Arthur W., 610.
 Johnson, O. R., 436.
 Johnson, Robert S., 1304.
 Johnston, F. S. Hildebrandt, F. M. and Mc Call, A. G., 726.
 Jones, D. F., 25.
 Joret, Georges Sirot Maurice, 1322.

 Josa, G., 980.
 Junqueira, José Romao, 1093.

 KAISER-VETSCH I. and Fehlmann Dr. J. W., 428.
 Kalinskij, J. B., 739.
 Kalt, Bertrani, 1272.
 Kataew, N. M. I., 383.
 Kayser, E., 1320.
 Kern, J., Hager G., 1168.
 Kinman, C. F., 492.
 Kleberger and Weber Ph., 1276.
 Kling, Friedrich, 398.
 Knobloch, Wilhelm, 1005.
 Knudsen, C. W., Woods, H. S., Collison, R. C., Fritz, C. M., Whittier, A. C., Beegle, F. M., Forbes, E. B., 1088.
 Koch, 740.
 Koch, Alfred and Oelsner Alice, 723.
 Koch, G. P., 269.
 Konradi, Daniel., 413.
 Kotelnikov, V., 906.
 Kovacsy, B., 527.
 Koval, V. D., 151, 1125.
 Kovalevskij, S. N., 668.
 Kowács, I., 539.
 Kozlov, M. W., 1183.
 Kulkarin, L. B., 182.
 Kunz, Rudolf, 559.
 Kuyper, J., 156.

 LABORDE, J., 1215.
 Lakshunana, T. Row., Visvanath, B., Raghunathawami, Ayyangar, 973.
 La Marca, F., 62.
 Lane, F. P. and Mac Nall, P. E., 438.
 Lane, G., 1196.
 Lanfranchi, Alessandro, 767, 810.
 Langworthy, C. F., and Holmes, D., 561, 1121.
 Lapazdrán José, 1181.
 Lashaw, U. L., Swanson, C. O., 1076.
 Laur, 678.
 Lawler, J., *page 1227*.
 Leather, J. W., 268, 452.
 Lécaillon, A., 427.
 Le Chir, C. A., 142.
 Lee Alfred, R., 326.

- Lee C., B., Bliss, R. K., 537.
 Lee, C. B., Snyder, W. P., Bliss, R. R., 540.
 Lefort, H., 1206.
 Lesage, Pierre, 28.
 Lewis, C. J. and Viwkers, F. A., 224.
 Lewis, R. G., *page 1234*.
 Lhéritier, A., Sergeant, Edm., Boquet, A. and Beguet, M., 75.
 Liberi, G., Cusmano, A., Marsiglia, T., Zay, C., 502.
 Lindet, 106, 1255.
 Lindhard, E., 168.
 Linnik, J. A., 753.
 Lipman, C. B., Waynick, D. D., 1256.
 Junk, Erik W., 287.
 ucks, R., 343.
 und, A. V., 1096.
 utje, Dr. 76.
 yman, I. Briggs and Shantz, H. L., 166.
 IACCA, RELII B., 141.
 Jac Collum, E. V. and Davis Mar-
 guerite, 231.
 Jac Pie, J. B., 1275.
 Jac George W., 10.
 Jachado Da Fonseca Joaquim, 956.
 Jac Nall, P. E. and Lane, F. P., 438.
 Mack Winfred, B. and Records F.
 doard, 319.
 Jackema, James, 488.
 Machens, A., 206.
 Macpherson, D. and Smith, W. G., 167.
 Maestrini, Dario, 197.
 Makrinov, J. A., 739.
 Malet, *pag^e 1565*.
 Malpeaux, L., 32, 219.
 Manasse, R., 842.
 Mancini, Camillo, 794, 1178.
 Mandekic, Vinko, 1172.
 Mangano, G., 1161.
 Mangham, R. C. F., 2.
 Maraghtini, Vittorio, 36.
 Marcelle, R., 796.
 Marcis, Arpad, 191.
 Marck, J., 530.
 Maronghi, E., 1316.
 Marogna, G., Tommasi, G., Sica, V., 509.
 Marshall, P. R., 204.
 Marsiglia, T., Liberi, G., Cusmano A.,
 Zay, C., 502.
 Martin, L. H., Walker, H. F. and Sher-
 mann, W. A., 237.
 Marvin, Charles, F., 5.
 Mascheroni, E., 538.
 Mason, S. C., 66, 873.
 Masoni, Giulio, 274, 616.
 Massart, Jean, 1266.
 Mast, H., 1108.
 Masur, 878.
 Mattei, G. B., 516.
 Maurin, G., 1211.
 Maxwell, H. L., Artis B., 1171.
 Mazzuoli, S., 318.
 May, N. L., Spafford, W. L., Philip,
 J. H., Perkins Arthur, L., 977.
 Mc Alister, H., 203.
 Mc Call, A. G., Hildebrandt, F. M.
 and Johnston, E. S., 726.
 Melikov, P. B. and Rosenblat, M., 54.
 Ménard, A., 1057.
 Mendizabal, Manuel, F., Moreira Aco-
 sta, S., 1180.
 Menozzi, A., 1166.
 Mensio, Carlo, 443.
 Merrill, Jason L., 340.
 Merrill, S. L., and Brand, Ch. S., 108.
 Mez and Hansen, 541.
 Mezzadrolì, G., Zapparoli, T. V. and
 Munerati, O., 51.
 Michalowski, Ohlmer, Morgen, Beger,
 881.
 Michel, P., Weill, E. I., Mouriquand
 G., 663.
 Middlebrooke, W. J., 61.
 Miège, Em., 1057.
 Miller E. C., 1170.
 Mills R. W. and Stupart R. W., *pag^e 177*.
 Milne, D., 152.
 Mir, Eugène I., 1080.
 Mitchell, Alexander J., 5.
 Mitchell, David Thomas., 1086.
 Modestov, A. P. I., 741.
 Molliard, Marin, 22, 281, 1269.
 Montandon, Hector, 985.
 Monteiro Da Costa, Antonio, 189.

- Moreira Acosta, S., Menzizábal, Manuel, F., 1180.
- Morgan, L. E., Rhue, S. N., Fritz, C. M., Beegle, F. M., Forbes, E. B., 998.
- Morgen, A., 417.
- Morgen, Beger, Ohlmer, Michalowski, 881.
- Moriya, S., 653, 656.
- Morosini, A., 320.
- Morris, C. D., 1280.
- Mottet, S., 161.
- Mouriquaud, G. and Weill E., 415.
- Mouriquaud, G., Weill, T. E., and Michel, P., 663.
- Mowry, H. H., 1110.
- Muenschner, W. I. C., 284.
- Munerati, O., Mezzadrolì, G., Zappazoli, T. V., 51.
- Murphy, L., 542.
- Murray, J. Allan, 194.
- Mutteleit, C. F., 1319.
- NANNESON, LUDWIG, 1213.
- Nègre, L. and Roquet, A., 71.
- Nelson V. E., Stenbock, H. and Hart, E. B., 196.
- Newlin, J. A., and Betts, H. S., 341.
- Nichols, J. B., 435.
- Nillson-Ehle, H., 286, 857.
- Nils, Stansson, 780.
- Norton, J. B., 29.
- Norton, R. P., Shaw, R. H., Turner, W. E., Wright, P. A., 885.
- Nostitz, A., 270.
- Novelli, N., 34, 35, 202, 399, 511, 750.
- Noyes, H. A., 143.
- O' CALLAGHAN, M. A., 1218.
- Oelsner, Alice and Koch Alfred, 725.
- Ohlmer, Beger, Morgen, Michalowski, 881.
- Oldershaw, A. W., Chevallier, J. B., 1099.
- Omedianskij, V. I., Solunskov, M., 731.
- Oparo, G. Roberto, 1074.
- Orwin, C. S., 102.
- Oskamp, Joseph, 9.
- Otis, D. H., 335.
- Otis, H. and Gunn, R. V., 1212.
- Ottow, W. M., 1254.
- PAGE, A. W., 440.
- Palmer, Leroy, S., 207.
- Pantanelli, E., 105.
- Papi, Ciro, 1314.
- Parisot, F., 1057.
- Parnell, R. F., 44.
- Parow, C., 1216.
- Patané, Giovanni, *page* 777, 1393.
- Pater, Béla J., 303.
- Paviolo Italo, 56.
- Pearl, Raymond, 208, 325, 423.
- Pee, Laby, E., 185.
- Pellegreffi, Maria, 40.
- Pellet, H., 446, 1321.
- Péneveyre, F., 1158.
- Perkins, Arthur, I., Philips, J. H., Spafford, W. J., May, N. S., 977.
- Perkins, Frank, 1112.
- Perez, Georges, V., 983.
- Perold, A. I., *page* 1.
- Petri, L., 1068.
- Pfeiffer, 621.
- Pfeiler, W., 73.
- Phillips, J. H., Perkins, Arthur, L., Spafford, W. J., May, N. S., 977.
- Philipschenko, Inn., 200.
- Philipps, E. F. and Demuth, George S., 210.
- Philipps, John C., 424.
- Pic, I. G., 1057.
- Pichering, Pencer, 1291.
- Pickering, S. and Bedford, 750.
- Picone, A., 336.
- Pierce, G. W., 456.
- Pitz, W., 729.
- Plehn, M., 783.
- Plumley, G. L., 903.
- Pomaskij, A., 742.
- Popenoe, Wilson and Shamel A. D., 761.
- Popenoe, Wilson and Earle, F. S., 306.
- Popesco, Alin and Kutilescu, J., 111.
- Popov, S. M., Sidorenko, K., Skvorzov, N. I., 114.
- Popp, M., 1169.
- Porchet, F., 1158.

- Potter, Ermine L., Withycombe, James and Samson, George R., 421.
 Potter, R. S. and Snyder, R. S., 724.
 Pouygues, H., 497.
 Pratalongo, U., 1165.
 Prayag, S. H., and Burns, W., 183.
 Priénichnikow, D. N., 622.
 Price, David, J., 1208.
 Priego, J. Manuel, *page* 1727.
 Puig y Nattino, Juan, 519.
 Pugliese, A., 338.
 RABAK, FRANK, 1020.
 Racah, Vittorio, 528.
 Raebiger, Rautmann, 877.
 Raebiger, H. and Spiegel, A., 77.
 Raghunadhaswami Ayyangar, Viswanath, B., Laksmana, T. Row., 973.
 Ray, Georges, 1015.
 Ram Ayyar, C. S. and Hutchinson, C. M., 227.
 Rant, A., 1262.
 Rauser, 1104.
 Rautmann, Raebiger, 877.
 Ravaz, L., 1187.
 Ravenna, Ciro, 853.
 Ravenna, G., 327.
 Reakes, C. J., and Astow, K. C., 316.
 Records, Edoard and Mack Winfred, B., 319.
 Reghel, R., 613.
 Rehious, Laurent, 1285.
 Reiche, Karl, 498.
 Reimer, F. C., 870.
 Remy, Th., 496.
 Répassy, M., 330, 1109.
 Rhue, S. N., Morgan I. E., Fritz, C. M., Beegle, F. M., Forbes, E. B., 998.
 Rice, James E., Rogers, C. A., 1106.
 Rie, F. E., 727.
 Rievel, 1221.
 Ringelmann, Max, 95, 548, 671, 673, 1009.
 Ritzman, E. G., 1197.
 Riviere, Gustave and Bailhache, Gabriel, 275.
 Riviere, C., 517.
 Roberts, W., 171.
 Robertson, F. E., Hopper, H. A., 909.
 Robertson, G. S., 736.
 Roemer, T., 169.
 Rogalskij, B. V., 1079.
 Rogers, C. A., Rice James, E., 1106.
 Rogers, L. A., 454.
 Roland, Mc Kee, 981.
 Roland, Mc Kee, Vinall H. N., 976.
 Romanovitch., 1087.
 Rommel, George M., 317.
 Roquet, A. and Negre, L., 71.
 Rosenblat, M. and Melikov, P. B., 54.
 Rosenfeld, A. H., 50.
 Ross, S. H., St. John, E. A., Hendrickson Norman, Hicks, W. B., Jenkins, M. K., Stohing, W. A., 1224.
 Rossi, Jacques, *page* 1067.
 Roster, Giorgio, 723.
 Roubaud, E., 137.
 Route, Lquis, 543, 1002.
 Rubinson, S. G., 100.
 Rullmann, 1025.
 Rupert, W. Jack, 1014.
 Rusnov, P., 186.
 Russell, E. J., 1312.
 Rustow, A. G., Crowther, Ch., 1095.
 Rutgers, A. A. L., 1286.
 SABACHNIKOW, A., 495, 620.
 Sa, Carlos and Cunha, Almeida, 532.
 Sagnier, Henry, 670, 1123.
 Saillard, Emile, 1117.
 Salmon E. S., 1273.
 Salmon, S. C., Call, L. E., Cunningham, C. C., 1179.
 Samson, George R., Withycombe, James and Potter Ermine, L., 421.
 Sanfelice, Francesco, 80.
 Sanfelice, Luigi, 414.
 Sanna, A., 680.
 Sasanow, W., 504.
 Saunders Edith, R., 305.
 Saunders, D. A. and Cardon, P. V., 297.
 Sawin, P., 1001.
 Sawyer, G. C., Daish, A. G., Davis, W. A., 505.
 Sawyer, A. M. and Thompstone, E., 751.

- Sazyperov, F. A., 1072.
 Scales, T. M., 145.
 Scarsellati-Sfarzolini, G., 45.
 Schafer, E. G., Gaines, F. F., 859, 971.
 Schmidt, M., 766.
 Schneidewind, 38, 149, 273, 779.
 Schroeder, J., 7.
 Scofield, T. H., Brand, C. J., Cook O. F., Swingle, W. J., 518.
 Scott, James, 1309.
 Selby, A. D. and Humbert, J. G., 146.
 Sergeant, Edm., Lhéritier, A., Boquet, A. and Beguet, M., 75.
 Severini, F., 564.
 Shamel, A. D. and Popenoe, Wilson, 761.
 Shamel, A. D., 67, 507, 1085,
 Shantz, H. L. Lyman I and Briggs, 166.
 Shantz, H. L. and Briggs, L. G., 392.
 Shaw, R. H., Turner, W. E., Norton, R. P., Wright, P. A., 885.
 Shaw Harry, B., 300.
 Shedd, O. M., 150, 390.
 Shermann, W. A., Gail, A. D. and Yeaw, F. L., 236.
 Shermann, W. A., Walker, H. F. and Martin, L. H., 237.
 Shimmel, E., 1279.
 Shirasawa, I. H., 654.
 Shistovskij, 847.
 Shreiber, A. F., 903.
 Shrive, I. W., 280.
 Shull, Charles Albert, 1059.
 Sica, V., Marogna, G., Tommasi, G., 509.
 Sidorenko, K., Skvorzov, N. I., Popov, S. M., 114.
 Sidorine, M. J., 1270.
 Sirot, Maurice Joret, Georges, 1322.
 Skalosoubov, N. L., 966.
 Skalskji, S., 844, 960.
 Skvorzov, N. I., Sidorenko, K., Popov, S. M., 114.
 Slocun, Rob R., 269.
 Smith, J. Warren, 5.
 Smith, W. G. and Macpherson, D., 167.
 Smith, T. A. J., 33.
 Smits, M. B., 638.
 Snyder, W. P., Lee, C. B., Bliss, R. R., 540.
 Snyder, R. S. and Potter, R. S., 724.
 Snyder, W. P., Burnett, E. A., 997.
 Söderbaum, H. G., 14, 970.
 Solunskov, M., I. Omedianskji, V. I., 731.
 Somerville, W., 752.
 Sonto Major, J., 986.
 Soroa, J. U., 1101.
 Spafford, W. I., Perkins, Arthur I., Philips, J. H., May, N. S., 977.
 Sparapani, G. C., 314.
 Spiegel, A. and Rachiger, H., 77.
 Spilmann, W. J., 99, 221.
 Spilmann, W. J., Dixon, H. M., Billings, G. A., 1114.
 Spiridonov, N., 975.
 Sprague, Malcolm, 5.
 Sprecher, Andreas, 967.
 Spring, F. G., 522.
 St. John, E. A., Hendrickson Norman, Hicks, W. B., Jenkins, M. K., Stokking, W. A., Ross, S. H., 1224.
 Stalions, Harry, 1298.
 Staffed, A. J. and Call, L. E., 149.
 Stapf, O., 37.
 Stapledon, R. G., Jenkins, T. J., 1277.
 Steenbock, H., 324.
 Stenmons, Walter, 42.
 Stenbock, H., Nelson, V. E. and Hart, E. B., 196.
 Stockdale, F. A., 229.
 Stoking, W. A., Jenkins, M. K., Ross, S. H., St. John, E. A., Hendrickson Norman Hicks, W. B., 1224.
 Stoklasa, Julius, 856.
 Strampelli, Nazareno, 1075.
 Strecker, 784.
 Stuart, William, 506.
 Stupart, R. W. and Mills, R. W., 177.
 Stutzer, 410.
 Stutzer, A. and Haupt, W., 87.
 Suchting, H., 1290.
 Supplee, G. C., Guthrie, E. C., 913.
 Surbeck, G., 93.
 Swanson, C. O. and Lashaw, U. I., 1076.

- Swart, N. L., Gorter, K., 1282.
Swett, J. T., 412.
Swiatopelk-Zawadzki, 1219.
Swingle, W. J. Cook, O. F., Brand, C.,
J., Scofield, T. H., 518.
Szell, L., 743, 861.
- TAKE, GERLACH, SCHNEIDEWIND, HA-
SELHOFF AND EBERHARDT, 149.
Tarchetti, A., 785, 786, 898.
Taruffi, D., 1176.
Taylor, George R., Ayers, Henry, 1113.
Taylor, Margaret C. D. and Craufield,
H. T., 85.
Taylor, O. M., 408.
Tcherkachine, D. L. and Zeretinov,
F. V., 157.
Tempany, H. A., 107.
Terni, Camillo, 768.
Thénard, A., 1058.
Theiler, Sir Arnold, 315.
Thiessen, Alfred H., 5.
Thompson, E. and Sawyer, A. M., 751.
Thorn, C. C., Holtz, H. F., 1012.
Tommasi, G. and Cortesi, F., 756.
Tommasi, G., Marogna, G., Sica, C., 509.
Torrend, P. C., 39.
Toulaïkov, N., 964, 1257.
Trabut, 515, 871, 876.
Tracy, S. M., 979.
Tronsov, A., 11.
Tropea, C., 520.
Tropea, G., 499.
Trouard-Riolle, 631.
True, Gordon H., Woll, F. W. and
Voorhies, E. C., 323.
True, R. H. and Bartlett, H. H. 279.
Truelle, 63.
Truog, E., 1163.
Trusov, A. C., 852.
Turner, W. E., Shaw, R. H. Norton,
R. P., Wright, P. A., 885.
- UMEDA, N., 1089.
Unger, Emile, 92.
Urban
Urban, J. J., Vitek, E., 858.
Urban, J. and Andrlik, K., 160.
- VALDIVIA, URBINA, 957.
Valvassori, V., 1019.
Van Der Laan, F. H., 769.
Van Luijk, 1071.
Van Harreveld-Lako, 619, 647.
Van Helten, W. M., 148, 649.
Vasquez, Adolfo, 1078.
Vazquez, José, 609.
Vecchia, L., 447.
Vickers, F. A., Lewis, C. I., 224.
Villard, V. and Desmoulin, A., 762.
Vinall, H. N., 982.
Vinall, H. N., Mc Kee Roland, 976.
Vinassa, G., 1063.
Vincent, C. C., 30.
Vincent, V., 1057.
Viutilesco, J. and Popesco, Alin, 111.
Virgili, Adolfo, 1203.
Visvanath, B., Lakshmana, T. Row.,
and Raghunathaswami, Ayyangar P.
A., 973.
Voelcker, J. A., 846, 854, 855.
Vogel, 845.
Völtz, W., Jantzon, H. and Dietrich,
W., 83.
Von Eckenbrecher, E., 513.
Von Hermann Charles, F., 5.
Voorhies, E. C., True, Gordon and Woll,
F. W., 323.
Voothees, F. F., 5.
Vriens, J. G. C., 174, 1281.
Vysotskij, G., 1164.
- WALKER FRANK, P., 535, 536.
Walker, H. F. Shermann, W. A., and
Martin L. H., 237.
Wallden, J. N., 860.
Ward, W. F., 193.
Warnebold, Heinrich, 1067.
Warren, G. F., 441, 1011.
Waters, H. J., 1077.
Watrud, H. O., 553.
Watson, E. A., 72.
Waynick, D. D., Lipmann, C. B.,
1250.
Weaver, L. A., 999.
Weber, Ph. and Kleberger, 1276.
Weill, E. and Mouriquard G., 415.

- Weill, E. I., Mouriquard, G. and Michel, P., 663.
Weiser, Etienne 113, 1017.
Weld, L. D. H., 1026.
Wellmann, Oscar, 89, 883, 1189.
Welton, F. A. and William, C. G., 1073.
Wentworth, Edward, N., 990, 992, 1091.
Wester, J., 420, 760.
Westgate, J. M. and Coe, H. S., 41.
Whiting, Albert L., 1066.
Whittier, A. C., Beegle, F. M., Forbes, E. B., Fritz, C. M., Collison, R. C., Woods, H. S., Knudsen, C. W., 1088.
Wiessner, and Lange, 660.
Wilder, H. I., 307.
Willey, Day Allen, 1259.
William, C. G. and Welton, F. A., 1073.
Winkler, L. W., 1167.
Winlow, C. M., 1100.
Wilson, J. K., 162.
Wise F. B. and Broomwell A. W., 444.
Withers, W. A. and Carruth, F. A., 82.
Withycombe, James, Potter Ermine, L. and Samson, George, R., 421.
Witte, Hernfrid, 289, 295.
Wohlgemuth, Richard, 892.
Woll, F. W. True, Gordon, H. and Voorhies, E. C., 323.
Woods, H. S., Knudsen, C. W., Collison, R. C., Fritz, C. M., Whittier, A. C., Beegle, F. M., Forbes, E. B., 1088.
Woodward, E. G., 534.
Woodward, T. E., 775.
Worobiew, S. J., 391.
Wright, P. A., Norton, R. P., Shaw, R. H., Turner, W. E., 885.
Wurtheim, A., 623.
Wyatt, F. A., 1271.
Wyllie, J., 554.
XÉNOPOL, NICOLAS, •1253.
YEAW, F. L., SHERMANN, W. AND GAIL, A. D., 236.
Young, Robert, A., 403.
ZANON, VITO, 1293.
Zapparoli, T. V., Mezzadrolì, G., Munerati, O., 51.
Zasukhin, A., 863.
Zay, C., Liberi, G., Cusmano, A., Marsiglia, T., 502.
Zlataroff, A. S., 1024.
Zimmermann, R., 894.
Zuntz, and Von Der Heide, 778.
Zur Herst, V. A., 422.
Zwart, S. G., 884.

III. — PLANT DISEASES.

A) INDEX OF SUBJECTS.

- ABROJO grande*, 684.
Aconitum paniculatum, 349.
Aconitum graellsii, 590.
Acridium spp. on Cultivated Plants in the Dutch East Indies, 253.
Acrocercops bifasciata, 590.
Acrocercops syngamma, 1137.
Acronycta rumicis, 823.
Actinomyces chromogenus on Potatoes in Cuba, 121.
Acythopeus citrulli, 589.
Adelphocoris lineolatus, 823.
Adoretus spp., Insects Injurious in India, 1137.
Aelia acuminata, 823.
 Africa; see British East Africa, South Africa, West Africa, etc.
Agallia sanguinolenta (Clover Leaf Hopper) an Hemipterous Pest on Leguminous Forage Plants in the United States, 1148.
Agave sisalana, 591.
Ageniaspis fuscicollis, 380.
Agriolimax agrestis, a Gasteropod causing Injury in Market-Gardens in the State of New-York, 600.
Agrotis, Pest of Plants Cultivated in European Russia, 823. *A. lineatilis*, 823.
Agromyza parvicornis, 129.
Agropyron Smithii, 242, 579.
Agrostemma Githago, 1043.
Agrotis: Cutworms Damaging Young Shoots of Vines Recently Planted in the Cape, page 8. *Agrotis* sp. Injurious to Tobacco in the Nyassaland Protectorate, 590. *A. segetum*, Beet and Potato Pest in Germany, 713. *A. segetum* and *A. spp.* in Russia, 823.
 Albino Seedlings in Maize, 25.
Albugo Ipomoeae-panduratae, 696.
Alcides jrenatus, 1137.
Aleurocanthus woglumi, a Hemipterous Pest on Several Cultivated Plants in the Island of Cuba, 1347.
Aleurothrixus howardi, 836.
Aleyrodidae which are Harmful to Citrus and Other Plants in Various Countries, 1247.
 Almond: Animal Pests in New South Wales, 601. *Eurytoma* sp., Pest in Palestine, 1250.
Alocasia sp., 1332.
Alternanthera Achyrantha in Queensland, 1041.
Alternaria Panax, the Cause of a Root-rot of Ginseng (*Panax quinquefolium*), 248.
Alternaria Solani, 121, 1032.

- Allhaea rosea*, 379.
Alysicarpus, Host Plant of *Rhizoctonia Solani*, 123.
Amaranthus tristis, Host Plant of *Rhizoctonia Napi*, 123.
 American Bollworm, (*Chloridea obsoleta*), 590.
Amorphophallus campanulatus, Host Plant of *Rhizoctonia destruens*, 123.
Anagrus, page 326.
Anarsia melanoplecta, 1137.
Anastatus bifasciatus, page 330.
Anastrepha serpentina, a Dipteron Injurious to Several Fruit Plants in Brazil, 1054.
Anatracis plumigera, 1137.
Anatis ocellata, 136.
Andropogon Sorghum Infested *Bacillus sorghi*, 695.
 Angular Leaf Spot (*Bacterium lachrymans*), 467.
Anisoplia spp., 823.
Anobiidae, 385.
Anoplocnemis curvipes, 590.
Antermulariella fuliginosa on *Ilex aquifolium*, 239.
Antestia variegata, 1240.
Anthemis arcensis, 366.
Antherea eucalypti, 601.
Anthenomus : *A. grandis*, page 331.
Anthenomus sylvialis, 470.
Anthothrips aculeatus, 823.
Apamea testacea Injurious to Forage Plants in Sweden and Denmark, 256.
Apanteles : *A. congregatus*, 716. *A. fulvipes*, 136. *A. glomeratus*, page 330.
Aphalara calthae, 476.
Aphelinus spp. page 329, 827, 1139.
Aphicus Lesperidum, 1140.
Aphidius testaceipes, 597.
Aphidoletes sp., 1345.
Aphis : *A. gossypii*, 120, 590. *A. persicae*, 133. Control of Injurious Aphids by Ladybirds in Tidewater, Virginia, 594. *A. pomi* ("Green Apple Aphid") in the United States, 719. *A. pseudobrassicae*, a Pest of *Brassicae* and *Raphanus* spp. in America, 1345.
Aphrophora parallela, 825.
Aphycus flavus, 377.
Apion spp., 590, 823.
 Apple : Apple Breeding in Idaho, 30. Life History of the Codling Moth (*Carpocapsa pomonella*) in Maine, U. S. A., 131. Studies on the Codling Moth in the Central Appalachian Region, 132. Dimorphism in *Coniothyrium pirinum* Sheldon, 350. Mites Injurious in Sweden, 379. Apple Tree Mildew new to Yorkshire, 472. The *Psyllidae* of the Cleveland (England), 476. A Contribution to the Biology of *Plenodomus fuscomaculans*, Injurious to Apple Trees, 572. Sulphur-Lime Mixture as a Substitute for Bordeaux Mixture in Controlling Certain Fungi parasitic on Fruit Trees, 577. Some Injurious Indian Weevils (*Curculionidae*), 589. Animal Pests of Fruit Trees in New South Wales, 601. *Plesiocoris rugicollis* and *Orthotylus marginalis*, Capsids Injurious to Apple Trees and Fruit in England, 603. Vegetable Parasites in Russia, 688. *Aphis pomi* in the United States, 719. *Trichoderma Koenigi* causing Root-rot of the Apple Tree, in Virginia, 943. Unspotted Tentiform Apple Leaf Miner (*Ornix gemmatella*), a Microlepidopterous Pest of several Fruit Rosaceae in America, 1050. The Codling Moth and Power of Resistance to Cold, 1138. Insect Pests of Agriculture in British East Africa, 1240. New or Interesting Fungi Occurring in England, 1327.
 Apricot : Some Injurious Indian Weevils, 589. *Recurvaria monella*, microlepidopteron injurious to, 602. See also Fruit Growing.
Arctiidae, 590.

- Argemone mexicana*, host plant of *Rhizoctonia Napi*, 123.
- Argentine Republic: *Chilocorus 4-pustulatus*, a Natural Enemy of *Aphis persicae* and perhaps also of *Eriosoma lanigera* in Argentine, 133. Fungoid Diseases of the Sugar-cane at Tucuman 813. Experiments in Locust Control 1044.
- Argyresthia illuminatella*, 380.
- Argyrophysa erotias*, 1137.
- Army Worm, 470.
- Aroids, Storage Rots of, 1332.
- Arrhenatherum elatius* and *Ustilago Arrhenatheri*, 243.
- Ar., *(Colocasia antiquorum)*, 122.
- Arsenate: Arsenate of copper, for the destruction of *Crioceris melanopes*, 254. Paris green and bran, for the control of *Tetraneura*, 181. Arsenate of lead, page 12, 295, 259, 376, 485, 590, 601, 718, 828, 1151. Efficacy of Various Arsenical Preparations in control of Insect Pests, 828.
- Artichoke: *Aschochyta hortorum*, a new Pest of, in Italy, 815.
- Arradunia Sinoni-Chino*, 300.
- Arvicola amphibius*, 487.
- Aschochyta: A. Achlydis*, 1030. *A. dematidina* on Stems and Leaves of Clematis, 818. *A. hortorum*, a new Pest of the Artichoke in Italy, 815. *A. Juglandis*, 349. *A. Vincae*, 1327. Vegetable Parasites in Russia, 688.
- Ascosphaera carpocapsae*, 131, 132.
- Ash: Injurious to, in Russia, 462. *Psyllidae* Injurious to Cleveland (England), 476. Parasites in Russia, 688.
- Asopia jarinalis*, 607.
- Asparagus, Insects Pests in Russia, 823, 1239.
- Asphodelus fistulosus*, 1130.
- Asphondylia*, 305.
- Aspidiotiphagus citrinus*, Endoparasite on *Chrysomphalus dictyospermi* in Italy, 948.
- Aspidiotus: A. betulae*, 368. *A. camelliae*, 1142. *A. hederae* and *A. ostreaeformis*, 706. *A. perniciosus*, page 325. *A. spp.* in Zanzibar, 591. *A. spp.* in Somaliland, 824. Notes on Samoan Coccidae, 592. Animal Pests of Fruit Trees in New South Wales, 601.
- Asterolecanium bambusae*, 591, 592.
- Astrantia major*, 462.
- Athalia spinorum*, 823.
- Athesapecta oryzae*, 589.
- Atriplex hortensis*, host plant of *Spinacia oleracea*, 119.
- Australia: Turnip weed (*Rapistrum rugosum*, All.) in South Australia, 587. *Carrichtera annua*, a New Weed in, 588. Common Phosphorescent Toadstool (*Pleurotus nidiformis*) and "Sticky Timber Pholiote" (*Pholiota adiposa*), ricineae attacking Wood, in, 820. *Nysius vinitor*, a Hemipterous Pest in, 1049. *Blastophaga Ghigi* n. sp., and *Plesiodontes froggatti*, Chalcid Hymenoptera from Australia, Living on the Fruits of *Ficus stenocarpa* and *F. macrophylla* Respectively, 1251. *Xanthium canadense* a New Weed, 1339.
- Austria: *Bombyx pini*, Injurious to Pine Trees in Austria, 136. Control of the Canadian Musk Rat in Austria, 265. New Record of *Puccinia Galanthi*, in Austria, 464. Comparative Experiments in Austria on the Control of Field-Voles, 486. *Lygus spinola* and *L. pratensis*, Rhyncote Pests on Vines in Austria, 1349.
- Avocado: (*Persea gratissima*), 591.
- Azalea charitifex*, 599.
- BACILLUS: *B. Sorghi* on *Andropogon Sorghum* in Salt Lake Valley, Utah, 695. The Part played by Insects in the Spread of *Bacillus amylovorus*, 932.
- Bacterium: *B. coli*, 122. *B. lachry-*

- mans* n. sp., 467. *B. tumejaciens*, 936.
- Bacteriosis, of Sugar-Beet, 238.
- Bagnallia oryzae*, 598.
- Baltimore oriole (*Icterus galbula*), 716.
- Bamboo: Bamboo Smut Fungus in Cuba, 360. Report on some Coccid Pests of, from Zanzibar, 591. A New Disease of the Bamboo caused by *Scirrhya bambusae* n. sp. in Italy, 817.
- Bamboo borer, (*Didonereus minutus*), 252.
- Bananas: Coccid Pests of, in Samoa, 592. *Musa* spp. as a Host Fruit of *Ceratitis capitata* in the Hawaiian Islands, 604.
- Barbarea praecox*, 358.
- Baris chloris*, 823.
- Baris portulacae*, 589.
- Barley: *Hordeum vulgare* host plant of *Rhizoctonia Napi*, 123. *Crioceris melanopa* (*Lema melanopus*) Injurious to Oats and Barley in Hungary, 254. Observations on the "Dwarfing" of Barley and on the Specific Resistance of Certain Graminae to several Species of Uredinaceae and Ustilaginaceae, 354. Vegetable Parasites in Russia, 688. Insect Pests of, in Russia, 823.
- Batrachedra rileyi*, 952.
- Beans: Insect Pests of, in Porto Rico, 129. Insect Pests of in Mauritius, 252. Mites injurious to, in Sweden, 379. Vegetable Parasites of, in Russia, 688. *Tychius quinque-punctatus*, a Coleopterous Pest of Beans in Apulia, Italy, 832. On the Susceptibility of *Phaseolus vulgaris* and *P. multiflorus* to Bean Rust (*Uromyces appendiculatus*) and other Fungoid Diseases, 933. The Susceptibility of *Phaseolus vulgaris* to Haricot Rust (*Uromyces appendiculatus*), 1227.
- Bean Bug, 367.
- Bean weevil, 252.
- Beech: Fungous Parasites of, in Russia, 462.
- Beets: New Disease of Beets, probably of a Physiological Nature, in the North of France, 117. Insects in Porto-Rico, 129. Biochemical Researches on the Bacteriosis ("Rübenschwanz-fäule") of the Sugar-Beet, 238. Effect of Attacks by *Cercospora beticola* on the Composition of Sugar Beets, 357. Yellowing of Sugar Beets in France, during 1915, 460. Mosaic Disease in Beets, 567. Relation of Stomatal Movement to Infection by *Cercospora beticola*, 690. *Agrostis segetum*, Beet and Potato Pest in Germany, 713. Insect Pests of in European Russia, 823, 1239. *Peridroma margaritosa* in California, 953. Climatic Conditions as related to *Cercospora beticola*, 1226.
- Berberis vulgaris*, 353.
- Beta: *B. bengalensis* host plant of *Rhizoctonia Napi*, 123. *Beta vulgaris* attacked by *Peronospora Schachtii*, 119. Vegetable Parasites of, in Russia, 688.
- Betula alba*, 688.
- Bignonia buccinatoria*, 701.
- Birch: Fungous Parasites of, in Russia, 461. Psyllids on, in the Cleveland, England, 476.
- Birds: Woodpeckers and their Relation to Forestry in the British Isles, 370. Experiments on the Treatment of Cereal Seeds for the Control of "Bunt" and "Smut" and also for keeping of Birds, 574. *Corvus scapularis*, 590. Birds in the Vineyards in the Region of Nîmes, 1143.
- Black locust borer: *Cyrtene robiniae*, 596.
- Black thread disease, 1131.
- Blastophaga ghigi*, 1251.
- Blepharipoda scutellata*, 136.
- Blepharipoda scutellata*, page 330.

- Blister rust** (*Peridermium filamentosum*), 585.
- Blitophaga undata*, 823.
- Blossom end rot**, 470.
- Bombycomorpha pallida* ("pepper tree caterpillar") a Lepidopteran Pest on the Pseudo-Pepper Tree (*Schinus Molle*) in the Transvaal, 1149.
- Bombyx pini*, 136, 538.
- Bordeaux Mixture**, 240, 249, 470, 577.
- Botrytis*: *B. Bassiana* on *Nonagria typhae*, 1046. *Botrytis (cinerea?)* and *Rhizopus (nigricans?)* as the cause of Rot in Strawberries, 1235. On the "Breakage" (Cassure) of Tulips, 118. Researches on Blight in Seedlings, 1336.
- Brachycolus noxius*, 823.
- Brachyderes incanus*, 136.
- Brachyplatys pacificus*, 367.
- Bracon spathiformis*, 381.
- Branch gall** (*Peridermium filamentosum*), 585.
- Brassica* spp., 123, 688, 1336, 1345.
- Brassolis sophorae* ("Coconut Butterfly"), 378.
- Brazil**: *Ligyris fossator* attacking Sugar Cane in Brazil, 833. *Anastrepha serpentina* a Dipteron Injurious to Several Fruit Plants in, 1054.
- "Breakage" of Tulips, 118.
- British East Africa**: *Diurithrothrips coffeae* on coffee in, 372. Injurious Insects in, 1240.
- British Guiana**: *Brassolis sophorae* a Butterfly Injurious to Coconut Palms in, 378.
- Broccoli**, Parasites of, in Latium, 469.
- Bromus inermis*, 688.
- Brown Blight of Tea** (*Colletotrichum Camelliae*), 582.
- Brown rot** (*Sclerotinia cinerea*), 356.
- Bruchophagus gibbus*, 823.
- Bruchus abjectus*, 252.
- Bruchus chinensis*, 252.
- Bryobia pratensis*, 601.
- Bryonia alba*, 379.
- Bud rot of Coconut in Cuba**, 116.
- Bulgaria**: *Sclerotinia Linhartiana* on Quince, New to Bulgaria, 474.
- Bursera Simaruba*, 837.
- Busseola fusca*, 590.
- Byssothecium circinans*, 689.
- CABBAGE**: Insects Pests of, in Porto Rico, 129. *Eurydema oleracea*, 257. Control of Cabbage Yellows through Disease Resistance, 355. Club-rot (*Plasmodiophora brassicae*) in New Zealand, 358. Insect Pests of, in Russia, 823.
- Cabbage palm**, *Oreodoxa oleracea*, 578.
- Cabbage yellows**, *Fusarium conglutinans*, 355.
- Cacao**: *Marasmius perniciosus* n. sp. cause of "Witch Brooms" on the Cocoa-tree in Surinam, 124. Pests and Diseases of, in the Dutch East Indies, 253. *Philephedra theobromae*, a new Coccid Pest of, from Trinidad, 599. *Corticium salmonicolor* ("pink disease") of Cacao, in the Island of Trinidad, Antilles, 1132. *Helopeltis* and its Relation to Cacao Trees, 1249.
- Cacoechia piceana*, 380.
- Cacoechia responsiva*, 601.
- Cactophagus* spp., 365.
- Caenopaues*, 365.
- Cajanus indicus*, 252.
- Calamintha*, host plant of *Rhizoctonia Napi*, 123.
- Calamondin**, *Citrus mitis* 804.
- Calandra granaria*, 607.
- Calandra oryzae*, 252, 1229.
- Calcium Cyanamide** as a Means of Destroying Weeds, 366.
- Calcium Hypochlorite** as Means of Controlling the Diseases Spread by Seeds, 241.
- Californian thistle**, *Cnicus arvensis*, 434.
- Calliptamus italicus*, 823.
- Callopistria floridensis*, 825.
- Calocoris angustatus*, 712.
- Calosoma sycophanta*, page 35.

- Calonectria Gymnosporangii*, and *C. Höhneltiana*, 571.
Calpe ophideroides, 1137.
Camarosporium rubicolum, 1327.
Campoplex variabilis, 470.
Canada: *Tetrastichus asparagi*, Egg Parasite of *Crioceris asparagi* in Canada, 477. The « Parsnip Webworm » (*Depressaria heracliana*), an Insect Enemy of the Parsnip, in Canada, 717. *Platyptus wilsoni*, a New Species of Coleopteron attacking Coniferous Trees in British Columbia, 720. New Species of Parasitic Fungi discovered in Canada, 1030. *Hypoderma deformans* n. sp. attacking the Leaves of *Pinus ponderosa*, 1039. Diseases that Attack Vines in Ontario, Canada, 1338. Plant and Animal Pests of the Vine in Ontario Canada, 1350.
Capeweed, (*Cryptoserimum calandulaceum*), 944.
Capsella Bursa-pastoris, 358.
Caragana arborescens, 688.
Carbolineum, 249, 259, 803. See also Prevention and Control.
Carduus spp., 944.
Carica Papaya, host plant of *Rhizoctonia Solani*, 123.
Carnation: An *Oidium* Mildew in England, 700.
Carpocapsa: *C. pomonella*, 131. Studies of *C. pomonella* in the Central Appalachian Region, 132. *C. pomonella* in New South Wales, 601. The Caterpillars of the Goat Moth (*Cossus cossus*) and the Colling (*Carpocapsa pomonella*) and their Powers of Resistance to Cold, 1138.
Carriechiera annua, a New Weed in Australia, 588.
Carrots: Inoculation of *Bacterium coli*, 122. Vegetable Parasites of, observed, in 1913 in the Government of Tula, Russia, 688. *Depressaria heracliana*, a Pest of 717.
Cassida spp., 823.
Castilleja miniata, 585.
Catalpa spp. 716.
Catalpa sphinx, (*Ceratonia catalpae*), 716.
Catbird (*Galeoscoptes carolinensis*), 716.
Catopsilia, 590.
Cecidomyia destructor, and *C. spp.*, 470, 823, 1229, 1247.
Cedestis gysselinella, 380.
Celery: Insects Pests of, in Porto Rico, 120. A Celery Fungus (*Septoria Petroselinii* var. *Apii*) New to Yorkshire, 468. *Peronospora parasitica* and *Septoria Petroselinii* var. *Apii* Injurious to Celery in Latium, 469. *Septoria Apii* var. *Magnusiana* and *S. Apii-graveolentis* n. sp., injurious to Celery in the Neighbourhood of Petrograd, 816.
Centaurea Cyanus, 366.
Cephaelis abietis, 945.
Cephus pignucius, 823.
Ceratitis capitata, 365, 484, 601, 604, 1155.
Ceratonia catalpae ("catalpa sphinx"), 716.
Cercospora: *C. avicularis*, 349. *C. beticola*, 357. Relation of Stomatal Movement to Infection by *Cercospora beticola*, 690. Climatic Conditions as related to *Cercospora beticola*, 1226. *C. Cypripedii*, 462. *C. Gutizotiae*, 463. *C. Kopei*, 813. Further Studies on Peanut Leafspot *C. personata* Injurious to the Leaves of *Arachis hypogaea*, 581. Vegetable parasites in Russia, 688.
Cercosporella: *C. Lini*, new to science, collected in the District of Tursk, Russia, 462. *C. Vervetii*, 462. *C. Epimedii*, 463.
Cereals: Insects Injurious to Cereals. Leguminous Plants and other Stored Grains in Mauritius, 252. Experiments on the Treatment of Cereal Seeds for the Control of "Bunt" and "Smut" and also for keeping of Birds, 574. Insects Injurious

- to Cultivated Plants in the Nyassaland Protectorate, 590. The Spring Grain Aphid or "Green Bug" (*Toxoptera graminum*) in America, 597. Insects Pests of in Russia, 823. *Agrostemma Githago* among Cereal Grains: Determining the Coefficient of Impurity, 1043. Mildew of Cereals (*Semerospora macrospora*) in Spain, 1128. An Attempt to Destroy Wild Mustard (*Brassica Sinapisrum*) in Fields of Cereals, 1238. Animal Pests of, in Russia, 1239. On Specialisation in Parasitic Fungi with Special Reference to the Specialisation of Rust on Cercals, 1328.
- Cronasia sphenophori*, page 330.
- Cronema* (?) *africana*, 591.
- Ceroplastes: *Scutellista* against *Ceroplastes* spp., page 326. *C. floridensis* in Zanzibar, 591. Notes on Samoan Coccidae, 592.
- Ceratomya denticornis* in Porto-Rico, 129.
- Ceuthorrhynchus portulacae*, 589.
- Ceuthorpora*: *C. Euxynyi*, 1327. *C. Pollacii*, 930.
- Chaetothyrium efflicum* on *Ilex aquifolium*, 239.
- Chalets annulata*, 378.
- Chauliognathus marginatus*, 595.
- Chelinidea*, 365.
- Chenopodium album*, host plant of *Rhizoctonia Napi*, 123.
- Cherry-tree: *Profenusa collaris* injurious to Cherry, 375. Parasites of, in Russia, 462. Some Injurious Indian Weevils, 589. Animal Pests of, in New South Wales, 601. Vegetable Parasites in Russia, 688. Brown Rot of Prunes and Cherries, 702. *Galerucella cavicolis*, 718, 1052.
- Chestnut-tree: Persistence of Viable Pycnosporos of the Chestnut Blight Fungus on Normal Bark below Lesions, 351. Seasonal Duration of Ascospore Expulsion of Chestnut Blight Fungus, 352.
- Chestnut blight fungus, (*Endothia parasitica*), 351, 352.
- Chilo infuscatellus*, 595.
- Chilocorus*: *C. bipustulatus*, 368, 707, 1140. *C. binulnerus*, 377. *C. 4-pustulatus*, 133. Species of Coccinellidae introduced into California against *Aspidiotus perniciosus*, page 328.
- Chionaspis*: Notes on Samoan Coccidae, 592. *Chionaspis usambarica*, and *C. spp.* 824.
- Chloride of Barium against *Crioceris melanopa*, 254.
- Chloridea obsoleta*, 590.
- Chloris Gayana*, 1333.
- Chlorops taeniopus*, 823.
- Choetocnema horiensis*, 823.
- Cholus cattleiae*, 1346.
- Charophila ciliaria*, 1146.
- Chrysomphalus*: *C. dictyospermi*, 577. 827, 948, 1140, 1145, 1245. *C. rossi*, 592. *Chrysomphalus rossi* var. *ferandii*, 824.
- Chrysopa californica*, 1244.
- Chrysophlyctis endobiotica*, 938.
- Cicee, (*Phelypaen ramosa*), 586.
- Cicer arietinum*, 123, 252.
- Cinamomum glanduliferum*, 701.
- Cinamomum zeylanicum*, *Pestalozzia Palmarum* injurious to, in the Federated Malay States, 247.
- Cinnamon tree, see *Cinamomum zeylanicum*.
- Cirphis loreyi*, 590.
- Citricola scale, (*Coccus citricola*), 377.
- Citrullus vulgaris* host plant of *Rhizoctonia Solani*, 123.
- Citrus barkrot, 804.
- Citrus canker, see (*Pseudomonas Citri*).
- Citrus Fruits: *Chilocorus bipustulatus* and *Exochomus quadripustulatus* as Natural Control of Scale Insects Injurious to, 268. *Paralephomastix abnormis* parasite of *Pseudococcus citri*, 369. *Coccus citricola*, (Citricola Scale) in California, 377. *Exobasidium citri* in Russia, 463.

- The "Fruitfly" (*Ceratitis capitata*) Injurious to Citrus in Greece, 484. Gummosis in the Citrus Plantations of Florida, 803. Citrus Barkrot in the Philippines, 804. Fruit Injury during the Fumigation of Citrus Trees: Causes and Remedies, 806. *Pseudococcus* spp., in the Citrus Plantations of Southern California, 835. *Aleurothrix howardi*, 836. Sour Scab of Citrus Plants in Florida, 928. *Sclerotinia Libertiana* in California, 1037. *Aphicus hesperidum*, an Ectophagous Parasite on the Cochineal of Citrus Fruits, 1140. Mottle-Leaf of Citrus Trees in Relation to Soil Conditions, 1225. Insect Pests of Agriculture in British East Africa, 1240. Species of *Aleyrodidae* Harmful to Citrus and Other Plants in Various Countries, 1241. Citrus Canker in the Philippines, 1337.
- Ciuma Tutumului*, 586.
- Cladosporium*: In Switzerland, 249.
- Cladosporium myrtilicolum*, 349.
- Clasterosporium carpophilum*, 462.
- Claviceps purpurea*, 688. *C. Paspali*, 1333.
- Clematis*, attacked by *Ascochyta clematidina*, 818.
- Clover: Morphology and Conditions of Development of the "Sclerotium Disease of Clover" (*Sclerotinia trifolium*), 811. Insect Pests of, in European Russia, 823.
- Club-root, see *Plasmodiophora Brassicae*.
- Cnicus arvensis*, 123, 364.
- Coccidae: The White Vine Mealy Bug in the Provinces of Mendoza and La Rioja (Argentina), 135. Report on some Coccidae from Zanzibar, 591. Notes on Samoan Coccidae, 592. Observations on the Insect Parasites of Some Coccidae, 1139. *Holcocera iceryaella* a Lepidopteron that Destroys Cochineal Insects in California, 1142.
- Coccinella quadripunctata*, 136.
- Coccobacillus Acridiorum*, 1044.
- Coccolus laurifolius*, 701.
- Cocophagus*, sp., page 328, 377.
- Coccus*: *C. citricola*, 368, 377. *C. frontalis*, 592. *Coccus indicus* and *C. confusus capensis*, 365.
- Cochinilla colorada de la Viña* (*Putvinaria vitis*), 260.
- Cochylis: The Life History and Control of *Conchylis*, 708. Tobacco Juice for the Treatment of *Conchylis*, 709. The Efficacy of Hot Water Treatment against "Cochylis" and "Eudemis", 829. Nicotine products tried in Germany against "Cochylis" and "Eudemis", 950.
- Cockchaers (*Melolontha*). Control of, 710.
- Coconut: Necessity of Legislation against the Coconut Bud-Rot in Cuba, 116. Pests and Diseases on Cultivated Plants in the Dutch East Indies in 1914, 253. *Byassolis sophorae*, a Butterfly Injurious to Coconut Palms in British Guiana, 378. Report on some Coccid Pests of, from Zanzibar, 591. Notes on Samoan Coccidae, 592. Diaspids Collected in Southern Italian Somaliland, 824.
- Codling Moth (*Carpocapsa pomonella*), 601.
- Coema Galanthi*, 464.
- Coffee: Pest and Diseases in the Dutch East Indies, 253. New Thrips Damaging Coffee, in British East Africa, 372. Report on some Coccidae from Zanzibar, 591. Fungus Diseases of Coffee in Malaya, 814. Insect Pests of, in British East Africa, 1240.
- Cold: Resistance of *Cossus cossus* and *Carpocapsa* to, 1138.
- Coleoptera injurious to *Opuntia*, 365.
- Colletotrichum*: *C. camelliae*, 582. *C. exiguum*, 349. *Colletotrichum fulva*

- luni, 813. *Colletotrichum Lineola*, 1327.
- Colocasia: *C. antiquorum*, 122. *Colocasia* spp., 1332.
- Commandra *umbellata*, 126, 251.
- Common phosphorescent toad stool, *Pleurotus indeformis*, 820.
- Conarys bicolor*, page 328.
- Conchyliis ambiguaella*, see *Cochylis*.
- Coniatus indicus*, 589.
- Conifers: *Polyporus Schweinitzii*, 584. *Platypus wilsoni* Coleopteron attacking Coniferous Trees in British Columbia, 720. *Rozomofskyia* spp., Mistletoes Injurious to Conifers in the United States, 1135.
- Coniostoma*, 379.
- Coniothyrium: Dimorphism in *Coniothyrium pirinum*, 350. *Coniothyrium coffeae*, 814. *Coniothyrium Hypoglossi*, 930.
- Conitaria sorghicola*, 294.
- Conartaria tritici*, 178.
- Convergent ladybird (*Hippodamia convergens*), 594.
- Copper: Treatment of the Late Blight of Potato *Phytophthora infestans* with, 245. Researches on Vine Mildew; Favourable Time for treatment, 250. Treatment of Cereal seeds with, 574 Action of Copper Sulphate on Vine Mildew, 693. See also Prevention and Control.
- Crescentine, 574.
- Crotalaria capsularis*, host plant of *Rhizoctonia Solani*, 123.
- Crucium vagum* and its host plants in India, 123.
- Crucium salmonicolor* ("pink disease") of Cacao in the Island of Trinidad, Antilles, 1132.
- Crynetes coerules*, 381.
- Crythaica monacha*, 129.
- Crythaica arcuata*, 825.
- Crythaica gossypii*, 129.
- Cryptophaga erosa*, 590.
- Cryptus cossus*, 1045, 1138.
- Cotton: *Gossypium*, host plant of *Rhizoctonia Solani*, 123. *Aphis gossypii*, 129. Fungi Parasitic on, in the District of Suchum (Russia), 463. Insects Injurious to, in the Nyassaland Protectorate, 590. Report on some Coccidae from Zanzibar, 591. Nature of the Damage caused by the "Pink Boll-worm" (*Gelechia gossypiella*) to the Cotton Shrub in Egypt, 714.
- Cotton leaf miner, 590.
- Cotton leaf roller (*Sylepta derogata*), 590.
- Cotton shoot webber, 590.
- Court néué, see Bramble-leaf disease.
- Cowpea weevil, (*Bruchus chinensis*), 252.
- Cranberry fruit Worm, 470.
- Cranberry weevil, 470.
- Crotalaria*: *Protenusa collaris*, 375. *Psyllidae* in Cleveland (England), 476. Fungi parasitic on, in Russia, 688.
- Cremnops* spp., 595.
- Crepis capillaris*, 944.
- Crioceris*: *C. asparagi*, 477. *C. melanopa* (*Lema melonopus*), Injurious to Oats and Barley in Hungary, 251. *Crioceris meridigera*, 823.
- Cronartium*: *C. coleosporioides*, 585. *C. pyriforme*, 251. *Cronartium ribicola* attacking *Ribes* in Ontario, 911.
- Crossosmia*, page 330.
- Crotalaria juncea*, host plant of *Rhizoctonia solani*, 123.
- Cruciferous Plants: *Perenospora parasitica*, 1329. *Cryptococcus montivivieri*, page 327. *Cryptophaga* spp., 601. *Cryptostemma calendulaceum*, 941. *Cryptus flagitator*, 717.
- Cuba: Necessity of Legislation against the Coconut Bad-Rot in Cuba, 116. *Phytophthora infestans*, *Alternaria solani* and *Actinomyces chromogenus* on Potatoes in Cuba, 121. Bamboo Smut Fungus in, 360. *Aleurocanthus woglumi* a Hemipterous

- Pest on Several Cultivated Plants, in 1347.
- Cucumber: Insects Attacking in Porto-Rico, 129. Mites injurious to, in Sweden, 379. Angular Leaf-Spot of Cucumbers caused by *Bacterium lachrymans*, 467. *Acythopeus citrulli*, 589. Fungi Parasitic on Russia, 688. Insect Pests of, in Russia, 823, 1239. A New Infectious Mosaic Disease of the Cucumber, 926. Mosaic Disease in Cucumbers grown under Glass, 927.
- Cucumber marrow fly (*Dacus vertebra-tus*), 1151.
- Cucurbita maxima*, host plant of *Rhizoctonia solani*, 123.
- Cucurbitous Plants Attacked by *Dacus vertebra-tus*, 1151.
- Cuscuta* spp.: Anatomical Determination of the Grains of Clover Dodder (*Cuscuta Trifolii*) and of *C. suaveo-lens*, 127. Comparative Researches on the Dimensions of the Seeds of Clover and Dodder, 362. *Triptilon* spp. in Russia, 688. Researches on the Dodder of Flax, 1230.
- Cutworms, page 8.
- Cyanide against *Cyrtene robiniae*, 590.
- Cydonium oleaginum*, 577.
- Cylindrophora Fagi* var. *candida* on *Pinus sylvestris*, 570.
- Cyrtene robiniae*, 590.
- Cynodon Dactylon*, 58.
- Cyrtacanthacris nigricornis*, 1341.
- Cystopus candidus* on *Capsella Bursa pastoris* and *Lepidium virginicum*, 119.
- Cyrtodiplospora parallela*, 1030.
- Cytospora*: *C. stictosoma*, 1327. *Cytospora Tiliae*, 462.
- DACTYLIS GLOMERATA**, 688, 1327.
- Dactylopius*: Viticulture in South Africa, page 8. *Dactylopius vitis* in Argentina, 135.
- Dacus oleae* and its parasites, page 330.
- Dacus vertebra-tus* (cucumber and vegetable marrow fly), a Dipteron Harmful to Cucurbitous Plants in South Africa, 1151.
- Daedalea quercina*, 461.
- Dandelion (*Taraxacum officinale*), 363.
- Delphinium*, host plant of *Rhizoctonia destruens*, 123.
- Dematophora*, 348.
- Denmark: *Apamea testacea* Injurious to Forage Plants in Denmark, 256. Effect of the Destruction of the Barberry on the Common Rust of Wheat, 353. Mosaic Disease in Beets, 507. Report on Diseases of Agricultural Plants in Denmark, in 1914, 568.
- Depressaria heracliana* ("parsnip webworm"), 717.
- Diabrotica bivittata*, 129.
- Diabrotica graminea*, 129.
- Dianthus aeneus*, 136.
- Diacelus rapae*, 1345.
- Dianthus*, host plant of *Rhizoctonia destruens*, 123.
- Diaporthe Batatas*, 696.
- Diaporthe stictosoma*, 1327.
- Diarthrothrips coffeae*, a New Thrips Damaging Coffee in British East Africa, 372.
- Diaspids Collected in Southern Italian Somaliland, 824.
- Diaspis**: *D. pentagona* on *Hibiscus esculentus* in Porto-Rico, 120. *Diaspis pentagona* and *Prospaltella berlesii*, page 324. *Diaspis pentagona*, host plant of *Chilocorus bipunctatus*, 308. *D. pentagona* on *Hibiscus Sabdariffa* in Zanzibar, 501. *Prospaltella berlesii* against *Diaspis pentagona*, in Piedmont in 1915, 707.
- Diaphania hyalinata*, 120.
- Diatraea**: *D. saccharalis*, 170. *D. striatalis*, 595.
- Didonerus minutus*, 252.
- Diestrammema marmorata*, 1242.
- Digitalis lutea*, 349.
- Dinaspis reticulata*, 824.

- Dioryctria schultzeella*, 380.
Dioryctellus laevimarga, 1340.
Dioscorea: Inoculations of *Bacterium coli* in, 122.
Diospyros virginiana, 931.
Diparopsis castanea, 590.
Diplodia: On Coffee in Malaya, 814.
D. Nuttiana, 1030. *Diplodia tuberculicola*, 696. *Diplodia Zeae*, the cause of "dry rot" in maize, 1033. *Diplodia* sp., a Melon Disease in the United States, 1036. *Diplodia* spp., injurious to Economic Aroids, 1332.
Diplodina pallor, 249.
Diplodina Passerini, 1327.
Diplogaster lophata, 826.
Dipsacus fullonum, 119.
Diptera injurious to *Opuntia*, 305.
Djomoer Parah, 1229.
Dodonaea viscosa, 687.
Dolichoderus bituberculatus, 1249.
Dolichos biflorus and *D. Lablab*, host plants of *Rhizoctonia solani*, 123.
Dortfleckenkrankheit, 1028.
Draconotus elegans, 595.
Dried currant moth, (*Ephesia caryella*), 252.
Dryobates villosus monticola, 262.
Dutch Indies: Pest and Diseases on Cultivated Plants in the Dutch East Indies in 1914, 253. Potato Diseases in the Dutch East Indies, 940. *Stilbella Heveae* and *Ustilina zonata*, Pests on Rubber in Sumatra, 1234. Diseases and Pests of the Pepper Plant at Banka, Dutch Indies, 1335.
Dysdercus farinutella, 380.
Dysdercus spp., 590.
Earias: *E. insulana* on cotton, *Hibiscus* and *Eriodendron* in Nyassaland, 590.
EARTHNET: *A. hypogaeae* Host Plant of *Rhizoctonia solani*, 123. Further Studies on Peanut Leaf-spot (*Cercospora personata*), Injurious to the Leaves of *A. hypogaea*, 581.
Echinium vulgare, 1340.
Egg plant, Insects Peats of, in Portorico, 129.
Egypt: Nature of the Damage caused by the "Pink Boll-Worm" (*Gelechia gossypiella*) to the Cotton Shrub in Egypt, 714.
Elaeis: Pest and Diseases of, in the Dutch East Indies, 253.
Elasmus sp., 595.
Elanion erythrocephalus, 590.
Elms: Mites injurious to in Sweden, 379. Fungi Parasitic on, in Russia, 462. On the Existence of Two Annual Generations of the "Elm-galerucella" (*Galeruca luteola* F. Müller) and their Alternation, 593. Vegetable Parasites of, in Russia, 688.
Empetrum minus depilator, 589.
Empoasca mali, on Beans in Portorico, 129.
Empusa Aphidis, 1345.
Endothia parasitica, 351, 352.
Enzyloma Pastinacae, 571.
Ephesia truncataria var. *faxonii*, 470.
Ephesia cahirella, 252.
Ephesia kahniella, 607.
Epiblema tedella, 380.
Epica: *Lyda hypotrophica*, parasitic on, 839.
Epicometis hirta, 823.
Epilachna dregii, 1147.
Epilachna territa, 919.
Epilobium roseum, 349.
Epinotia manana, 380.
Epipactis latifolia, 462.
Episilia simulans, 823.
Epirix cucumeris, 129.
Eriochia canadensis, a Dipterous Pest of *Ribes* in America, 954.
Eriopeltis testucae, 706.
Eriophyes: Eriophyes (*Phytoptus*) *pyri*, 601. A Mite Pest on Litchi, 1252.
Eriosoma lanigera, 133, 1051.
Eriosoma pyricola, 1051.

- Ernobius mollis*, 381.
Erysiphe: *E. communis*, 568. Vegetable Parasites in Russia, 688. The Physiological Races of *Erysiphe graminis* on Wheat and Oats, 1125.
Erythroxylum Coca see *Coca*.
Eublemma, 590.
Eucalymptus tessellatus, 592.
Eudamus proteus on Beans in Portorico, 129.
Eudemis: *Polychrosis botrana*, 708.
Tobacco Juice for the Treatment of *Polychrosis*, 709. The Efficacy of Hot Water Treatment, 829. Nicotine Products tried in Germany, 950.
Eulecanium nigrofasciatum, 1053, 1141.
Euproctis chrysorrhoea, page 389.
Eurycreon sticticalis, 131.
Eurydema oleracea, 257, 373.
Eurygaster spp., 823.
Eurytoma sp., a Hymenopterous Pest on Almond Trees in Palestine, 1250.
Entellix tenella on Beans in Portorico, 129.
Euxesta spp., 813.
Euxoa spp., 823.
Evotria resinella, 380.
Evotomys glareolus, 487.
Exoascus: Sulphur-lime Mixture as a Substitute for Bordeaux Mixture in Controlling certain Fungi Parasitic on Fruit Trees, 577. *E. deformans* and Preventive Treatment, 692.
Exobasidium citri, 463.
Exobasidium vaccinii, 461.
Exochilum giganteum, 136.
Exochomus quadripustulatus, 368.
FAGOPYRUM sp., 688.
False blossom, 470.
Feltia exclamatoris, 823.
Ferrous sulphate as Means of Prevention against Fungoid Disease of the Raspberry, 249.
Festuca pratensis attacked by *Apamea testacea*, 256.
Ficus stenocarpa, and *F. macrocarpa*, 1251.
Fidia viticida, 1350.
Fig: Two new British Coccidae injurious to, 706.
Fiji: *Oenecyrtus pacificus*, a New Egg Parasite from Fiji, 367.
Fir: Insects injurious to Pine and Fir Trees in Sweden, 380. The *Psyllidae* of the Cleveland (England), 476.
Flax: *Linum usitatissimum*, host plant of *Rhizoctonia Napi*, 123. *Cercospora* *Lim.*, 462. Researches on Flax Dockler, 1236.
Florida wax scale (*Ceroplastes floridensis*), 591.
Flour beetle (*Tribolium ferrugineum*), 252.
Flowed bog fireworm, *Rhopobonia cerniana*, 479.
Flowers: Vegetable Parasites of, in Russia, 688. *Cholus catelleyae* n. sp. and *Diognellus laciniator* n. sp., Curculionid Pests of Orchids in America, 1346. *Puccinia Iris* on some cultivated *Iris*, in Yorkshire, England, 471. An *Oidium* Mildew on Carnations, 700.
Fomes: *F. fomentarius*, 461. *Fomes pinicola*, 461.
Forage Crops: *Apamea testacea* Injurious to Forage Plants, 256. The Clover Leafhopper (*Agallia sanguinolenta*), a Hemipterous Pest of Leguminous Forage Plants in the United States, 1148. Diseases of Some Forage Plants in Natal, South Africa, 1333.
Forsythia viridissima, 942.
Four spotted weevil, (*Bruchus quadrimaculatus*), 252.
France: New Disease of Beets, probably of a Physiological Nature in the North of France, 117. Effect of Attacks by *Cercospora beticola* on the Composition of Sugar Beets, 357. Yellowing of Sugar Beets in

France during 1915, 460. Staphylinid Injurious to Turnips in France 482. Experiments for Control of *Ranunculus arvensis* a Weed infesting Wheat in Touraine, 703. Birds in the Vineyards in the Region of Nîmes, 1143. *Urophylctis Alfalfae* on Lucerne ("tumeurs marbrées"), in France, 1233.

Frontina frenchii, 716.

Frost: Frost Protection for Fruit and Vegetables in the United States, 5. Measures to prevent injury by Frost in Catalonia, Spain, 922. The Effect of Frost on the Roots of Rye, 1325. The Bad Effects of Frost upon Tea and Quinine Plants in Java, 1326.

Fruit growing: Insects Injurious to, in Mauritius, 252. The "Fruit-fly" in Greece, 484. The Study of the Diseases of Cultivated Plants in India, 569. Animal Pests of Fruit Trees in New South Wales, 601. *Recurvaria nannella*, Micro-lepidopteron Injurious to Fruit Trees in Italy, 602. *Galerucella cavicollis* a Fruit Tree Pest in the United States, 718, 1052. Bridge Grafting for saving Fruit Trees with Injuries due to Animals or Mechanical causes, 830. *Anastrepha serpentina* in Brazil, 1054. Insect Pests in India, 1137. Coleoptera Harmful to Fruit and Flowering Plants Cultivated in South Africa, 1152. Concerning the Fruit Fly (*Ceratitis capitata*) in Tunis, 1155. Cottontail Rabbits (*Sylvilagus* spp.) in the United States, 1156. See also Citrus Fruit, Apple, Peach, etc.

"Funago" in the Department of Sotshi (Caucasus), 239.

Fumaria parviflora, host plant of *Rhizoctonia Napi*, 123.

Fungi: Contribution to the Mycological Flora of the Tyrol, 349. Contribution to the Mycological Flora

of Russia, 461, 462, 463. A Contribution to the Knowledge of Dalmatian Fungi, 571. A Fungus of Uncertain Systematic Position occurring on Wheat and Rye in the Salt Lake Valley, 578. New Species of Parasitic Fungi discovered in Canada, 1030. New or Interesting Fungi occurring in England, 1327. On Specialisation in Parasitic Fungi with Special Reference to the Specialisation of Rust on Cereals, 1328. *Fusarium*: *F. conglutinans*, 355. *F. Lycopersici*, 573. *Fusarium radicola*, the cause of Rot in Potato Tubers in the United States, 1130. *Fusarium roseum*, 688. *Fusarium* sp. ("die-back disease") a Pest on *Hibiscus* in Malay, 1134. *Fusarium oxysporum* and *F. tricothecoides* in their Relation to Tuber-rot in Potatoes, 1232. *Fusarium* spp., 742, 1332. Effects of certain Species of *Fusarium* on the composition the Potato Tuber, 1129.

Fusicoccum spp., 1327.

GALANTHUS NIVALIS, 464.

Galega officinalis, 821.

Galeoscoptes carolinensis, 716.

Galeruca luteola, 593.

Galerucella of the Elm, 593.

Galerucella cavicollis, 718, 1052.

Galium cruciatum, 462.

Gangrena humeda, 813.

Gardening: Insects affecting Vegetable Crops in Porto-Rico, 129. *Plasmodiophora Brassicae*, 358. *Tetramorium caespitum* as a Pest of Coldframe and Greenhouse Crops in Virginia, 481. *Agriolimax agrestis*, a Gastropod causing Injury in Market-gardens in the States of New-York, 600.

Gele Topboorder, 595.

Gas: Researches as to Injuries caused by Lighting-gas to Plants, 1027.

Gelechia gossypiella, 714.

- Geniocerus* spp., 478.
 Germany: Umfallen der Tulpen, 118.
 New Fungi in Saxony (Germany), 570. *Agrotis segetum*, Beet and Potato Pest in Germany, 713. *Lyda hypophrophica* a Hymenopterous Pest of Epicea, 839. Means of Control of *Chrysophlyctis endobiotica*, a Potato Pest, 938. *Chortophila cilicrura* and *Thereva* sp., Pests on Rye in Silesia, Germany, 1146. Researches on the Dodder of Flax (*Cuscuta Epilinum*) in Germany, 1236. *Diestrammena marmorata* (*Tachycines asynamorus*) an Orthopteron from German Greenhouses, 1242.
Gerstaeckeria, 365.
 Gestrepte Stengelboorder, 595.
 Ginseng, see *Panax quinquefolium*.
 Gipsy moth (*Porthetria dispar*), 470.
Glenospora Sacchari, 813.
Gloeosporium: *G. roseolum* and *G. acerinum* on *Acer platanoides*, 570. *Gloeosporium tiliaeecolum*, Leaf-spot Disease of Lime in England, 361. Vegetable Parasites in Russia, 688.
Glyphodes unionalis, 715.
Gnathothrichus, 720.
 Goatsrue (*Galega officinalis*), 821.
Gonocephalum pusillum, 823.
Gossyparia ulmi, 706.
 Gramineae: *Apamea testacea* injurious to, in Denmark and Sweden, 256. *Calocoris angustulatus* in British India, 712. Experiments on the Wintering of the Teleutospores of "Rust" in Grasses, 1126. Diseases of Some Forage Plants, 1333.
Grapholitha schistaceana, 595.
Grapholitha spp. 380.
 Gräsrostflyet, 256.
 Grauwe Boorder, 595.
 Great Britain and Ireland: Leaf-spot Diseases of Lime in England, 361. Woodpeckers and their Relation to Forestry in the British Isles, 370. A Celery Fungus new to Yorkshire, 468. *Puccinia Iridis* on Cultivated Iris, New to Yorkshire, 471. Apple Tree Mildew, *Podosphaera leucotricha* Salm., New to Yorkshire, 472. "Sooty Blotch" of the Pear (*Leptothyrium carpophilum*) in England, 473. The Psyllidae of the Cleverlands (England), 476. *Polyporus schweinitzii*, Injurious to Conifers in Great Britain, 584. *Plesiocoris rugicollis* and *Orthylus marginalis*, Capsids Injurious to Apple Trees and Fruit in England, 603. An *Oidium* Mildew on Carnations, in England, 700. Two new British Coccidae and other British Species Injurious to Plants, 706. *Phoma Lavandulae* on Lavender (*Lavandula Officinalis*) in England, 1133. New or Interesting Fungi Occurring in England, 1327.
 Greece: The "Fruit-fly" Injurious to Citrus in, 484.
 Green bug (*Toxoptera graminum*), 597.
 Green lacewing fly (*Chrysopa californica*), 1244.
 Greenhouses: *Diestrammena marmorata*, a pest in German, 1242.
Gryllus servillei, an Injurious Orthopteron in New Zealand, 951.
Guignardia Bidwellii, 1038, 1350.
Guignardia istriaca, 571.
Guizotia oleifera, 463.
 Gumbo limbo (*Bursera Samarabai*), 837.
 Gummosis in the Citrus Plantations of Florida, 803.
Gymnosporangium: *G. confusum*, 571. An Asiatic Species of *Gymnosporangium*, established in Oregon, 703. *Gymnosporangium Sabinae*, 462.
 HALTICA: *H. chalybea* ("Grapevine flea beetle") coleopterous Pest of *Vitis rotundifolia* and *V. Munsoniana* ("Muscadine grapes") in the United States of America, 1055. *Haltica chalybea*, in Ontario, 1350. *H. euphorbiae* and *H.* spp. 323.

- Halysia vigintiguttata*, 136.
Haplothrips tritici, 823.
 Hawai: *Musa* spp. as a Host Fruit of *Ceratitis capitata*, 604. *Eriophyes* n. sp., an Acarid Pest on Litchi (*Nephelium Lit-chi*) in the Hawaiian Islands, 1252.
 awkhit (*Crepis capillaris*), 944.
 awkweed, 944.
 azel: Hazel Woods in the Province of Messina Invaded by Caterpillars, 376. Fungi Parasitic on, in Russia, 461. New or Interesting Fungi Occurring in England, 1327.
Helianthus: *H. diversicatus*, 119. Insects Injurious to Cultivated Plants in the Nyassaland Protectorate, 590. *Helianthus* resistant to "rust", 1127.
Heliphila unipuncta, 470.
Heliothis obsoleta, 129, page 331.
Helminthosporium turcicum, 1333.
Helvellis on tea plants, 253. On cacao, 1249.
Heps quisquilis, 130.
Hemiberlesia, *residens*, 824.
Hemichloraspis: *H. aspidistrae* in Samoa, 592. *H. aspidistrae* in New Jersey, 825. *H. minor* in Porto Rico, 129. *H. spp.* in Zanzibar, 591.
Hemileia vastatrix, 814.
 Hemiptera injurious to *Opuntia*, 365.
Hemites compositus, 381.
Hemiteles mesochoridis, 716.
 Hemp: *Cannabis sativa* host plant of *Rhizoctonia Napi*, 123. Vegetable Parasites of in Russia, 638. Insects Pests of in Russia, 823, 1239.
Hendersonia Rubi, 249.
Hepatica acutidoba, 119.
Heptasimria curvilineata, 595.
Heracleum sphondylium, 757.
Heringia dodecella, 380.
 Russian Fly, see *Cecidomyia*.
Hendersonia schachtii, var. *avenae*, 568.
Heromyia leucogyna, 590.
Herpex piceus, 255.
 Hevea: *Ustilina zonata* on *Hevea brasiliensis* in the Federated Malay States, 812. *Phytophthora* sp. as the Cause of Black Thread Disease of *Hevea brasiliensis* in Burma, 1131. *Stilbella Heveae* and *Ustilina zonata*, Pests on Rubber in Sumatra, 1234.
 Hibiscus: *H. cannabinus* host plant of *Rhizoctonia solani*, 123. *Hibiscus esculentus*, 129. The Mycological Flora of the District of Suchum (Russia), 463. *Fusarium* sp., a Pest on *Hibiscus* in the Federated Malay States, 1134.
 Hip canker, 585.
Hippodamia convergens, page 328, 594.
Hippotion celerio, 590.
Holocara iceryecella, 1142.
Hoplismenus dimidiatus, 717.
Horismenus microgastri, 716.
Hormiscium callisporum, 1327.
 Horse-radish: Insects Pests of, in Porto Rico, 129. Insects injurious to the Horse-radish, in Sweden, 373.
Humulus Lupulus, 379, 688.
 Hungary: *Phyllocolpa sicicalis* Microlepidoptera Injurious to Plants Cultivated in Hungary, 134. *Critocoris melanopa* Injurious to Oats and Barley, 254. Rabbits injurious to Forests, 263.
Hyalopus, 814.
 Hydrocyanic acid gas, fumigation, 375, 377, 506, 1342. See also Means of Prevention and Control.
Hydroecia nictitans, 823.
Hylobius abietis and Methods of Control from observations Made in 1913-14 in the province of Orel, Russia, 261.
Hymenocytus cravii, page 326.
Hyperaspis bimaculata, a Coccinellid Beetle Predatory on *Eulecanium nigrofasciatum* (terrapin scale), 1141.
Hypochnus violaceus, 689.
Hypoderma deformans n. sp., attacking the Leaves of *Pinus ponderosa* in the United States and Canada, 1039.

- Hypolimnus missippus*, 590.
- Hyponomeuta*: Species of *Hyponomeuta* Injurious to *Lonicera* and *Prunus* in Sweden, 259.
- Hypothenemus tabacum*, 716.
- Icerya purchasi* and *I. spp.*, page 323.
- 591, 837, 1142, 1246.
- Ichneumon*, 262.
- Icterus galbula*, 716.
- Idiocerus niveosparvus* and *I. clypealis*, Rhynchota Parasitic on Mango Trees in the Philippines, 1348.
- Ilex Aquifolium*, 239.
- Immunity: Relation between the Concentration of Hydrogen Ions and the Natural Immunity of Plants, 465.
- India: Species of the Genus *Rhizocionia* Injurious to Plants Cultivated in India, 123. Rat Plague in the Bombay Presidency, 264. The Study of the Diseases of Cultivated Plants in India, 569. Brown Blight of Tea, 582. Some Injurious Indian Weevils (*Curculionidae*), 589. *Thrips* (*Bagnallia oryzae*), n. sp., Injurious to Rice in India, 593. "Spike" Disease in Sandal, in India, 687. *Calacoris angustatus*, a Capsid injurious to Sorgho and other Gramineae in India, 712. *Phytophthora* sp. as the Cause of Black Thread Disease of *Hevea brasiliensis* in Burma, 1131. Insect Pests, 1137. Species of Braconid Hymenoptera, Parasites of Tripanid Diptera in India, 1243. Inkweed (*Phytolacca octandra*), 1340.
- Insects, entomophagous, and their Practical Employment in Agriculture, page 323. See also Prevention and Control.
- Insects, Injurious: Insects affecting Vegetable Crops in Porto-Rico, 129. Insects injurious to *Opuntia*, 365. Insects injurious to Pine and Fir Trees in Sweden, 380. Insects Injurious to Timber in Sweden, 381.
- Some injurious Indian Weevils (*Curculionidae*), 589. Insects Injurious to Cultivated Plants in the Nyassaland Protectorate, 590. Observations on the Life Histories of some Insects Injurious to Pine trees in the State Forests of the Province of Minsk (Russia), 605. Report on Insects Injurious to Flour and Grain in the Province of Ekaterinoslav, (South Russia) in 1915, 607. Insect Pests of Plants Cultivated in European Russia, in 1914, 823, 1239. Diaspids Collected in Southern Italian Somaliland, 824. Some Miscellaneous Economic Insects found in New Jersey, 825. The Part played by Insects in the Spread of *Bacillus amylovorus*, 932. Insect Pests of the Sugarcane in Queensland, Australia, 1048. Insect Pests in India, 1137. The Caterpillars of the Goat Moth (*Cossus cossus*) and the Codling Moth (*Carpocapsa pomonella*) and their Powers of Resistance to Cold, 1151. Coleoptera Harmful to Fruit as to Flowering Plants Cultivated: South Africa, 1152. Insect Pests of Agriculture in British East Africa, 1240.
- Iphiaulax medianus*, and *I. sp.*, 50.
- Ipomoea*: *Bacterium coli* on *Ipomoea Batatas*, 122.
- Ips sexdentatus*, 605.
- Ireland, see Great Britain.
- Iris: *Puccinia Iridis*, on 471.
- Ischnaspis longirostris*, 501.
- Isisoma orchidearum*, 825.
- Isosoma grande*, 694.
- Italy: Hazel Woods in the Province of Messina Invaded by Caterpillars, 376. *Peronospora parasitica* and *Septoria Petroselinii* var *Aptii*, Injurious to Broccoli and Celery. Latium, 469. Injury Caused to Vegetation in Grounds near the works at Terni, Italy, 506. *Oidium*

quercus on Chestnut Trees in Italy, 583. *Recurvaria nanella* Microlepidopteron Injurious to Fruit Trees in Italy, 602. Wintering of *Oidium* sp., a Pest of *Photinia serrulata* in Emilia, Italy, 691. *Pleospora Briosiana*, *Phomopsis Cocculi*, *Macrophoma Yuccae* and *M. Cinnamomiglanduliferi*, new Micromycetes discovered in Liguria, Italy, 701. *Prospallella berlesii* against *Diaspis pentagona* in Piedmont in 1915, 707. The Life History and Control of the Vine-Moths *Conchylis ambiguella* and *Polychrosis botrana*: observations made in 1914, by the Plant Diseases Observatory of Turin, Italy, 708. Tobacco Juice for the Treatment of the Vine Moths *Polychrosis botrana* and *Conchylis ambiguella*, in Piedmont, 709. *Zel-laria oleastrella* and *Glyphodes union-alis*. Lepidopterous Pests of the Olive Tree in Apulia, Italy, 715. *Ascochyta hortorum*, a new Pest of the Artichoke in Italy, 815. A New Disease of the Bamboo caused by *Scirrhia bambusae* n. sp. in Italy, 817. Investigations into a Disease of the Cones of *Pinus pinea*, 819. The Efficacy of *Aphelinus silvestrii* in Control of *Chrysomphalus dictyospermi*, in Sicily, 827. Insects injurious in the Rice Fields of the Province of Milan, 831. *Tychius quinquepunctatus*, a Pest of Beans, 832. Decree of the Lieutenant-general of the King containing Measures for the Control of Field-voles, 921. Some Practical Means of Control of Wheat "Sret-a", 923. Contribution to the Study of the Mycology of Liguria, Italy, 929. *Phomopsis diploglottidis*, *P. briosii*, *Coniothyrium pollacii*, new Micromycetes discovered in Italy, 930. The Control of Field Voles in Italy, 1056. Observations

upon *Icerya purchasi* and its Natural Enemy *Novius cardinalis* in Sicily, 1246.

Ilionida, 365.

Itoplectis: *Pimpla flavipes*, 381. *I. inquisitor* and *I. conquisitor*, 485. *Pimpla instigator*, 136. *Pimpla Leraclaei*, 717. *Itoplectis marginatus*, 132.

JASSIDAE, 590.

Java: Natural Enemies of Sugar-cane Borers in Java 595. Tobacco Diseases and Pests in Eastern Java, 1035. Diseases and Insect Pests which Attack Rice, 1229. The Bad Effects of Frost upon Tea and Quinine Plants in Java, 1326. Locusts in Java, 1341.

Java black rot, (*Diplodea* spp.), 1332.

Johnson grass, 1334.

Juniperus phoenicea and *J. oxycedrus*, 571.

KANIT as a Means of Destroying Weeds, 366.

Kalmalen, 373.

Kalmottet, 373.

Kermes virgule, 1139.

Khaya senegalensis, 590.

Kornvallmo, 366.

Korsbo, 366.

Krullotenziëkte, 124.

LACHNOSTERNA spp. ("white grubs") in Wisconsin, United States, 946.

Laemophloeus testaceus, 607.

Laphygma frugiperda in Porto-Rico, 129.

Lappa officinalis, 570.

Laria pisi, 823.

Lasioderma: *Lasioderma serricorne* ("tobacco beetle"), 590, 711.

Lasioptera cerealis, 823.

Lasius niger, 132.

Laspeyresia trichocrossa, 1137.

Lathyrus sativus, host plant of *Rhizotoma Napi*, 123.

- Lavender attacked in England by *Phoma Lavandulae*, 1133, 1327.
- Lecanium*: *L. ciliatum*, 706. *Lecanium persicae*, 1142. *L. viride*, 253. *L.* spp. in Zanzibar, 591. Notes on Samoan Coccidae, 592.
- Lecanopsis longicornis*, 706.
- Legislative and Administrative Measures: Necessity of Legislation against the Coconut Bud-rot in Cuba, 110. Ordinance relating to Insect Pests and Diseases of Plants, in Western Samoa, 683. Decree including the "Abrojo grande" (*Xanthium macrocarpum*) among Weeds in Uruguay, 684. Decree of the Lieutenant-general of the King of Italy dated the 28th June 1916 No 795 containing Measures for the Control of Field-voles in Apulia and adjacent Regions, 921.
- Leguminosae: Insects injurious to Cereals, Leguminous Plants and other stored Grains, 252. See also Bean, etc.
- Lema melanopa*, 254, 823.
- Lens esculenta*, host plant of *Rhizoctonia Napi*, 123.
- Leontodon hirtus*, 944.
- Leopard Moth (*Zeuzera pyrina*) a Dangerous Imported Insect Enemy of Shade Trees in the United States, 834.
- Lepidiotu albohirta*, 1343.
- Lepidium virginicum*, host plant of *Peronospora parasitica*, 119.
- Lepidium ruderale*, 358.
- Lepidoptera: Injurious to Opuntia, 365. Injurious to Coconut Palms in British Guiana, 378.
- Lepidosaphes: *L. citricola* in Zanzibar, 591. *L. moorsi* in Samoa, 592. *L. somalensis*, 824. *L. Uim*, 1139.
- Leptops hopei*, 601.
- Leptosphaeria: *L. coccinans*, 689. *L. microscopica*, 1327. *L. Sacchari*, 813.
- Leptostromella conigena*, 1030.
- Leptothyrium carpophilum*, 473.
- Leptothyrium platanoides*, 1327.
- Leucodermes* sp., 1144.
- Leucodermes lucifugus*, 826.
- Leucopholis rorida* in Manioc plantations, 258.
- Licoderma 4-dentatum*, 595.
- Ligyris fossator* and *L. f. ossor*, coleoptera attacking Sugar Cane in Brazil, 833.
- Limacinaula caucasica* on *Taxus baccata*, 239.
- Limanthria dispar*, page 329.
- Limes: *Ocularia citri*, 463. Coccidae on, Zanzibar, 591.
- Limonius aeruginosus*, 823.
- Lipernes*, page 327.
- Locusts: The migratory Locust, 823, 1239. Experiments in Locust Control by Means of *Coccobacillus acridorum* in Argentina, 1044. Locusts in Java, 1341.
- Locust-tree, The Effect of Cyanide on the Locust-Borer (*Cyllene robiniae*), 596.
- Lodging of Wheat, 685.
- Lonicera coerulea*, 349.
- Lonicera Xylosteum*, 688.
- Loxostege sticticalis*, 134.
- Lucerne: Species of the Genus *Rhizoctonia* Injurious to, in India, 123. *Pleosphaerulina* sp. a new Alfalfa Leaf-spot in America, 214. *Heteromix piccus*, an Insect Pest of Lucerne, in Australia, 255. A new disease of, due to *Morsonia Medicago*, 568. Vegetable Parasites of in Russia, 688. Behaviour of Different Forms of *Rhizoctonia caerulea* on, 689. Insect Pests of in Russia, 823. The Resistance of Lucerne to *Pseudopeziza Medicago* in Uruguay Attributed to the Use of Nitrogen, 1228. *Urophylaxis Alfalfae* on Lucerne ("tumours marbrées") in France, 1233.
- Luffa acutangula*, 591.
- Lupac, 586.

- Luzulaspis luzulae*, 706.
Lycium barbarum, 379.
Lycopersicum esculentum, host plant of *Rhizoctonia solani*, 123.
Lyda: *Lyda hypotrophica*, a Hymenopterous Pest of *Epicea* in the Forests of Roggenburg, Germany, 839. Contribution to the Life History and Anatomy of *Lyda hypotrophica* (= *Cephaleis abietis*), 945.
Lygus spinolae and *L. pratensis*, Rhyncote Pests on Vines in Austria, 1349.
Lymanuriidae, 594.
Lydia aetaceon, 1137.
- MACROCENTRUS, 595.
Macroedactylus subspinosus, 1350.
Macrophoma Yuccae and *M. Cinnamomi glanduliferi*, 701.
Macrosporium: *M. Papaveris* on *Papaver somniferum*, 570. *M. Solani* on Potatoes in Cuba, 121. *M. Solani* on Potatoes in Dutch East Indies, 940.
Maize: Insects Pests of in Porto Rico, 129. Insects injurious to, in Mauritius, 252. Plant Breeding in Cuba, 396. Insects Injurious to, in the Nyassaland Protectorate, 590. Insect Pests of in Russia, 823. *Batrachedra rileyi*, a Microlepidopterous Pest of Maize in America, 952. *Diplodia Zeae*, the Cause of Dry Rot in Maize, 1033. *Stiga lutea*, on 1040.
Maize beetle, (*Didymus minutus*), 252.
Malay States: *Pestalotia Palmarum*, Injurious to the "Cinnamon Tree" (*Cinnamomum Zeylanicum*) in the Federated Malay States, 247. *Ustilina zonata* on *Hexa brasiliensis*, 812. Fungous Diseases of Coffee in Malaya, 814. *Fusarium* sp., ("die back disease") a Pest on *Hibiscus* in the Federated Malay State, 1134.
Mandarins: Fungi parasitic on, in Russia, 463. Citrus Barkrot of in the Philippines, 804.
Mango hopper (*Idiocerus clypealis*), 1348.
Mangoes: Insects Injurious in the Nyassaland Protectorate, 590. Report on some Coccidae from Zanzibar, 591. Notes on Samoan Coccidae, 592. Insect Pests in India, 1137. *Idiocerus nivosus* and *I. clypealis*, Rhyncota Parasitic on Mango Trees in the Philippines, 1348.
Manihot utilisima: *Leucopholis virida* in Manioc Plantations, 258.
Maple: Mites injurious to Sweden, 379. *Gloeosporium roseolum* and *G. ucerinum* on *Acer platanoides*, 570. New or interesting Fungi Occurring in England, 1327.
Marasmius perniciosus n. sp. Cause of "Witch Brooms" ("Krullotenziekte") on the Cocoa-tree in Surinam, 124.
Market gardening see Gardening.
Marmara, 365.
Marssonina Delustrei, 462.
Marssonina Medicaginis, 568.
Mauritius: Insects Injurious to Cereals, Leguminous Plants and other Stored Grains in, 251.
Mayetiola destructor, page 332.
Medicago lupulina, host plant of *Rhizoctonia Napi*, 123.
Megilla maculata, 594.
Melanconium parvulum, 1030.
Melanconium Sacchari, 813.
Melandrium album, 462.
Melasma Lonicerae, 349.
Melica uniflora, 462.
Meligethes aeneus, 823.
Meligethes brassicae, 373.
Melilotus albus, 688.
Melissobaptis rufoventralis, 253.
Melittaria, 365.
Melolontha vulgaris, 710. *M. hippocastani*, 710. *M. melolontha*, 823.
Melons: Insect Pests of, in Porto

- Rico, 129. Mites injurious to, in Sweden, 379. *Orobancha ramosa* and *O. cumana* Parasites of, in Roumania, 586. *Thielavia basicola*, a new Pest of the Melon in Salt Lake Valley, Utah, 699. Insect Pests of, in Russia, 823. *Diplodia* sp., injurious to, in the United States, 1036.
- Membracidae*, 590.
- Mendoza moth borer, 365.
- Merulius lacrymans*, 461.
- Mesochorus aprilius*, 716.
- Metamasius hemipterus*, page 330.
- Meteorology, Agricultural: The Influence of Meteorological Factors on the Development of Plant Diseases, 459. The Influence of Rain-fall and the Non-Burning of Trash on the Abundance of *Diatrea saccharalis* injurious to the Sugar Cane, 479. Climatic Conditions as related to *Cercospora beticola*, 1226.
- Meteorus versicolor*, page 330.
- Microlepidoptera injurious in Sweden, 380.
- Microplitis catalpae*, 716.
- Microstoma juglandis*, 462.
- Microtus arvalis*, 487.
- Mikroklassia prima*, 480.
- Mildew: Researches on Vine Mildew, 250. Action of Copper Sulphate on Vine Mildew, 693. Variations in the Resistance of Vines to Mildew, 810. Mildew of Cereals (*Sclerospora macrospora*), in Spain, 1128. Mildew of the Potato, 1230.
- Millet: Vegetable Parasites of, in Russia, 688.
- Mimorista*, 365.
- Mineola vaccinii*, 470.
- Mint: *Phyllosticta Menthae*, on, 570.
- Mirabilis Jalapa* "Sorlago" Disease of, ("Marvel" of Peru"), 686.
- Mites Injurious to Various Wild and Cultivated Plants in Sweden, 379.
- Mjölktistel, 366.
- Moneilema*, 365.
- Monilia*: *M. cinerea*, 462. *M. Linhartiana*, 474. Brown Rot, 702.
- Monilochaetes infuscans* ("Sweet Potato Scurf"), Injurious to Sweet Potato, 580, 696, 697.
- Moniliopsis Aderholdii*, 1336.
- Monodontomerus dentipes*, 136.
- Monomorium pharaonis*, 481.
- Morus alba*, host plant of *Rhizoctonia solani*, 123.
- Mosaic Disease in Beets, 567.
- Mosquilla blanca de la vid (*Pseudococcus vitis*), 135.
- Mottle leaf, 1225.
- Müllera moniliiformis*, 378.
- Mulberry: Insects injurious to, in the Nyassaland Protectorate, 590.
- Musa* spp. as a Host Fruit of the Mediterranean Fruit Fly (*Ceratitis capitata*) in the Hawaiian Islands, 604.
- Mushrooms, edible: *Tinea cloacella* injurious to Dried Edible Mushrooms, 483.
- Muskat: (*Fiber zibethicus*) in Austria, 265.
- Mussidia albipartalis*, 590.
- Mustard: *Rhizoctonia Napi* injurious to, in India, 123. Club-root of, in New Zealand, 358. Insects Injurious to, in the Nyassaland Protectorate, 590. Insect Pests of, in Russia, 823.
- Mycosphaerella*: *M. Phaseolorum*, 463. *M. Saccardoana*, 571. *M. Uredinis* on *Arbutus Uredo* in Dalmatia, 571.
- Myelophilus minor*, 605.
- Myriamene comperi*, page 326.
- Myrtus communis*, 349.
- Mytilaspis ficus*, 706.
- Mytilaspis pomorum*, 601.
- Myzus persicae*, 594.
- NACO: *EIA indicata*, on Beans in Porto Rico, 129.
- Narnia*, 365.

- Nematodes*: In South Africa, page 7.
Undetermined nematode worm parasitic on aphids, 949.
Neotetranychus, 379.
Nepeta Cataria, 462.
Nephelium litchi, 1252.
Netherland: On the "Breakage" of Tulips, 118.
New South Wales: Animal Pests of Fruit Trees in New South Wales, 601. New Weeds in, 1042, 1132.
New Zealand: Club-root (*Plasmodiophora Brassicae*), 358. *Taraxacum officinale*, 363. *Puccinia suaveolens* as a Check on the Spread of *Cnicus arvensis*, 364. Goatsrue, a Weed in New Zealand, 821. Weeds, 944, 1310. *Gryllus servillei*, 951. *Xanthorhoe praefectata*, a Pest on *Phorminum tenax* in New Zealand, 1344.
Nonagria typhae, 1046.
Novius cardinalis against *Icerya purdasei*, page 324, 1246.
Nyassaland: Insects Injurious to Cultivated Plants in the Nyassaland Protectorate, 590.
Nysius vinitor [a hemipterous Pest in Australia, 1049.
OAK: Growth Incompatibility of Oak and Olive Trees, 348. Fungus parasitic on, in Russia, 461. A Honeycomb Heart-Rot of Oaks caused by *Stereum subpileatum*, 475. The Psyllidae of the Cleveland (England), 476. *Oidium quercus* on Chestnut Trees in Italy, 583. Vegetable Parasites of, in Russia, 688. New or Interesting Fungi Occurring in England, 1327.
Oats: *Avena sativa* host plant of *Rhizoctonia Napi*, 123. *Crioceris melanopa*, Injurious to Oats and Barley in Hungary, 254. Report on Diseases of in Denmark, 568. Experiments on the Prevention of *Ustilago Avenae*, 575. Vegetable Parasites of, in Russia, 688. *Phytophthora* sp. Injurious to Oats in America, 939. Studies on "Dorffleckenkrankheit" (Dry spot Disease) in Oats, 1028. The Physiological Races of *Erysiphe graminis*, 1125.
Oberea tripunctata, 825.
Occhio di pavone, 577.
Ochsencheimeria laurella, 823.
Ocnerostoma piniariella, 380.
Odonaspis secreta, 592.
Odonata, 374.
Oidium: *O. Quercus*, 583. *O. sp.*, 691.
Olive: Growth Incompatibility of Oak and Olive Trees, 348. *Chilocorus bipustulatus* and *Exochomus quadripustulatus* for the prevention and control of *Coccus citricola* and *Saissetia oleae*, 368. Sulphur-lime Mixture as a Substitute for Bordeaux Mixture in Controlling certain Fungi Parasitic on Fruit Trees, 577. *Zelleria oleastrella* and *Glyphodes Unionalis* Lepidopterous Pests of the Olive Trees in Apulia, Italy, 715.
Olpidium Brassicae, 1336.
Omo Mentek, 1229.
Omophlus leprooides, 823.
Oncideres cingulata (Hickory Twig Girdler), a Coleopterous Pest of *Diospyros virginiana*, ("persimmon") in the United State, 955.
Onion: *Bacterium coli* on *Allium Cepa*, 122. Insects injurious to, in Porto-Rico, 129. Vegetable Parasites of, in Russia, 688. Insect Pests of, in Russia, 823.
Onion weed, (*Asphodelus fistulosus*), 1136.
Onobrychis sativa, 462.
Ooencyrtus pacificus, a New Egg parasite from Fiji, 367.
Ooietrasicus beatus, page 325.
Ooteca mutabilis, 590.
Opatrum sabulosum, 823.
Ophion mauritii, 595.
Ophion vulnerator, 717.
Ophiura sp., 590.

- Ophonus calceatus*, 823.
Opilo domesticus, 381.
Opuntia: weed in Queensland, 365.
 Oranges: *Lepidosaphes citricola* in Zanzibar, 591. Notes on Samoan coccidae, 592. Citrus barkrot in the Philippines, 804.
 Orchids: *Cholus cattleyae* n. sp. and *Diorymellus laevimargo* n. sp., Curculionid Pests of Orchids, in America, 1346.
Orcus spp., page 326.
Oreodoxa oleracea, 378.
Oria musciosa, 823.
Ornix geminatella ("unspotted tentiform leaf miner of apple"), 1050.
Orbanche: *O. ramosa* and *O. cumana*, 586.
Orthotylus marginalis, 603.
Oscinella frit, 823.
Oscinis frit, 568.
Otiorrhynchus ligustici, 823.
Ovularia citri, 463.
Ovularia pulchella, 349.
Oxycaenus hyalinipennis, 590.
Oxycooccus macrocarpus, 470.
Oxyptilus periscelidactylus, 1350.
Oxythyrea funesta, 823.
Ozonium omnivorum, 696.
 PACHNODA spp., 1152.
Pachyneuron micans, 1345.
Pachytylus migratorius, 823, 1239.
Pachyzanota spp., 129.
Paeonia officinalis, 688.
Palaeococcus sp., 365.
Pales pavidus, 136.
 Palestine: *Eurytoma* sp., a Hymenopterous Pest on Almond Trees in Palestine, 1250.
 Palm: Mites injurious to, in Sweden, 379. Notes on Samoan Coccidae, 592.
Panax quinquefolium, 119, 248, 359, 698.
Pandemis ribesum, 380.
Papaver Rhoeas, 360.
Papaver somniferum, 570.
Parafairmairia gracilis, 706.
Paraleptomastix abnormis, a New Chalcidoid Parasite of the Citrus Mealy Bug (*Pseudococcus citri*) introduced from Italy into California, 369.
Paranagrus spp., page 325.
Parasa latistriga ("plum slug caterpillar"), 1154.
Paratetranychus, 379.
 Parch blight, disease of *Pseudotsuga Douglasii* in Oregon, 805.
Parlatoria: *P. blanchardii*, 824. *Parlatoria cinerea* on orange in Samoa, 592. *Parlatoria* spp. in England, 706.
 Parsnip webworm (*Depressaria heracliana*), 717.
Parpalum, 1333.
Pastinaca sativa, 570, 571, 717.
 Pavement Ant (*Tetramorium caespitum*), 481.
 Peach: *Chilocorus 4-pustulatus*, a Natural Enemy of *Aphis persicae*, 133. Mites Injurious to, in Sweden, 379. Sulphur-lime Mixture as a Substitute for Bordeaux Mixture in Controlling certain Fungi parasitic on Fruit Trees, 577. *Empetrorrhinus defoliator*, 589. Animal Pests of Fruit Trees in New South Wales, 601. *Recurvaria nanella*, injurious to, in Italy, 602. The Life History of *Exoascus deformans* (Peach-leaf Curl) and Preventive Treatment, 692. *Galerucella cavicollis* in the United States, 718, 1052. *Eulecanium nigrofasciatum* ("terrapin scale") Injurious to the Peach Tree in America, 1053. *Phylagathes laetus*, a Coleopteran Pest on the Peach Tree in South Africa, 1153.
 Peach leaf curl, (*Exoascus deformans*), 692.
 Peanut leaf spot, (*Cercospora personata*), 581.
 Pears: Eggs of an Insect of the Order Odonata, Occurring on Pear-tree Branches, 374. Mites Injurious to,

- in Sweden, 379. Fungi parasitic on, in Russia, 462. *Leptothyrium carpophilum* (?) in England, 473. Some Injurious Indian Weevils (*Curculionidae*), 589. Animal Pests of Fruit Trees in New South Wales, 601. Vegetable Parasites of, in Russia, 688. *Eriosoma pyricola* n. sp., injurious to, in California, 1051.
- Peas: Species of the genus *Rhizoctonia* injurious to, in India, 123. Insects injurious to, in Mauritius, 252. Vegetable Parasites of, in Russia, 688. Insects injurious to, in Russia, 823.
- Pegomyia hyoscyami*, a new Dipteron in the United States Harmful to Spinach and other Plants, 1150.
- Penitaphis trivialis*, 823.
- Penarthron carpocapsa*, page 330.
- Pentatoma ligata*, page 331.
- Pentilia* spp., page 327.
- Pentodon idiota*, 823.
- Pepper: Insects Pests of, in Porto Rico, 129. Diseases and Pests of, 1286.
- Pepper Tree Caterpillar (*Bombycomorpha pallida*); a Lepidopterous Pest on the Pseudo-Pepper Tree (*Schinus Molle*) in the Transvaal, 1149.
- Peregrinus maidis*, 129.
- Periderium filamentosum*, 585.
- Peridermium pariforme*, 251.
- Peridroma margaritosa* ("variegated cutworm"), 953.
- Perissopterus pithellus*, page 328.
- Perkinsiella saccharicida*, page 325.
- Pernosporaceae: On the Perennial Mycelium in Species, of, 110.
- Pernospora: Researches upon *Pernospora parasitica*, a Pest on Cruciferous Plants, 1329. *Pernospora* spp., 119, 160. Vegetable Parasites in Russia, 688.
- Persea gratissima*, see Avocado.
- Persea Coffeae*, 814.
- Perobozzia Palmarium* injurious to the "Cinnamon Tree" (*Cinnamomum zeylanicum*) in the Federated Malay States, 247.
- Peziza bulborum*, 118.
- Pezoporus tenthredinarum*, 375.
- Phaedon cochleariae* and other Insects Injurious to the Horse-radish in Sweden, 373.
- Phanerotoma tibialis*, 470.
- Phanurus beneficiens*, 595.
- Phaseolus*: *Ph. L. natus*, *P. Mungo* var. *radiatus* host plant: of *Rhizoctonia sclavi*, 123. *Ph. multiflorus*, 379. Fungi Parasitic on in the District of Suthum (Russia), 463.
- Phelybaea ramosa*, 586.
- Philaenus spumarius*, 373.
- Philagothes lactus*, 1153.
- Philephedra theobromae* n. sp., 599.
- Philippia oleae*, 368.
- Philippines: Citrus Barkot in Philippines, 804. Citrus Canker, 1337. *I. diocerus niveosparsus* and *I. dyopalis* Rhyncota parasitic on Mango Trees in, 1348.
- Phleum pratense* attacked by *Apamea testacea*, 256.
- Phlyctaena lappae*, 570.
- Phlyctenodes sticticalis*, 134, 480, 823.
- Pholiota adiposa*, 820.
- Phoma*: *P. Lavandulae*, on lavender in England, 1133, 1327. *P. lupulina*, 570. A "Phoma" Disease of Western Wheat Grass in Salt Lake Valley, 579.
- Phomopsis Cocculi*, 701.
- Phomopsis Diploglottidis* and *Ph. Brionii*, 930.
- Phormium tenax*, 1344.
- Phorocera claripennis*, 716.
- Photinia serrulata*, 691.
- Phthorimaea heliopti*, 590.
- Phygmidia coliformica*, page 330.
- Phyllachora*, spp., 688.
- Phyllostachys puberula*, 360.
- Phyllosticta*: *P. Betulae*, 696. *P. Calypae*, 716. *P. effricola*, 814. *P. Menisae* in Saxony, 570. *P. Sac-*

- chari*, 813. *P. translucens*, 349. Contribution to the Mycological Flora in Russia, 462.
- Phyllotreta nemorum*, 373.
- Phylloxera: In South Africa, page 7.
- Physalis Alkekengi*, 462.
- Physalospora tucumanensis*, 813.
- Phytolacca octandra*, 1340.
- Phytomyza chrysanthemi*, 825.
- Phytophthora: *Ph. Cactorum* on *Panax quinquefolium*, 119, 698. *P. infestans* on potatoes, 119, 120, 121, 245, 940, 1230. *Ph. sp.*, injurious to Oats in America, 939. *Ph. sp.* as the cause of "black thread disease" of *Hevea brasiliensis* in Burma, 1131.
- Phytoptus pyri*, 601.
- Picus villosus*, 717.
- Pieris: *P. brassicae* in Italy, page 329. *P. monuste*, in Porto-Rico, 129. *P. rapae*, 373.
- Pimpla, see *Isotroctes*.
- Pines: *Bombyx pini* in Austria, 136. *Pinus rigida* and *P. arizonica*, New Hosts of *Peridermium pyriforme* in the United States of America, 251. *Pinipestis zimmermani* in the United States, 262. Insects Injurious to in Sweden, 380. *Psyllidae* in Cleveland (England), 476. *Cylindrophora Fagi* on the branches of *Pinus* in Saxony, 570. *Polyporus Schweinitzii* injurious to, in Great Britain, 584. *Peridermium filamentosum* injurious to *Pinus ponderosa*, 585. Observations on the Life Histories of some Insects Injurious to Pine Trees in the State Forests of the Province of Minsk (Russia), 605. *Ripersia resinophila*, a Coccid Injurious to Pine Trees in the Himalayas, 606. Vegetable Parasites of, in Russia, 688. Investigations into a Disease of the Cones of *Pinus Pinea* in Italy, 819. *Hypoderma deformans*, 1039.
- Pinipestis zimmermani* ("Zimmerman Pine Moth"), 262.
- Pink disease (*Corticium salmonicolor*), 1132.
- Pionea forficatis*, 373.
- Piper Belle attacked by *Rhizoctonia destruens* in India, 123.
- Piraustra nubilalis*, 823.
- Pissodes validirostris*, 136.
- Pitangus sulphuratus*, 378.
- Placosphaeria cornicola*, 1030.
- Plaesiorrhina trivittata*, 590.
- Plasmodiophora Brassicae*, 358.
- Plasmopara* spp., 119.
- Platypus Wilsoni* n. sp., a new species of coleopteron attacking coniferous trees in British Columbia, 720.
- Pleistodontes froggatti*, 1251.
- Plenodomus destruens*, 696.
- Plenodomus fuscomaculans*, 572.
- Pleosphaerulina* sp. a new Alfalfa Leaf-spot in America, 244.
- Pleospora Briosiana*, 701.
- Plesiocoris rugicollis* and *Orthotylus marginalis*, Capsids injurious to Apple Trees and Fruit in England, 603.
- Pleurotus nidiformis*, 820.
- Plodia interpunctella*, 607.
- Plums: *Prunus laurocerasus* attacked by *Zukalia setosa*, 239. Species of *Hyponomeuta* Injurious to *Lonicera* and *Prunus* in Sweden, 259. Varietal Resistance of Plums to Brown-rot, 356. *Profenusa collaris*, 375. Mites injurious to, in Sweden, 379. Animal Pests of, in New South Wales, 601. Vegetable Parasites of, in Russia, 688. Brown Rot (*Sclerotinia cinerea*) of *Prunus* and *Cherries* in the North West Regions of the United States, 702. *Galerucella cavicollis* in the United States, 718. Studies on the Resistance of *Prunus* spp., to *Bacterium tumefaciens*, 936.
- Plum Slug Caterpillar (*Parasa latitriga*), a Lepidopterous Pest on Various Trees in South Africa, 1154.

- Pisus gamma*, 823.
Plutella cruciferarum, 568.
Plutella maculipennis, 129, 373.
Poa: Fungi parasitic on, in Russia, 462. Vegetable Parasites of, in Russia, 688.
Podosphaera: *P. leucotricha*, 472. *Podosphaera Oxyacanthae* and *P. leucotricha* in Idaho, United States, 30. ,
Podosporiella sp. a new disease of germinating wheat in Salt Lake Valley, 694.
Podostia nigrita, 823.
Pogonochaerus fasciculatus, 136.
Pokkahong, 813.
Pollinia polleni, 368.
Polvillo, 813.
Polychrosis botrana, see *Endemis*.
Polychrosis viteana, 1350.
Polygonum Convolutus, 366.
Polygonum dumetorum, 349.
Polyporus: *P. Schweinitzii* in Great Britain, 584. *Polyporus* spp., in United States, 475. Contribution to the Mycological Flora in Russia, 461.
Poplar: Mites injurious to, in Sweden 379. Vegetable Parasites of, in Russia, 688.
Porthetria dispar, 130, 470
Porto-Rico: Insects affecting Vegetable Crops, 129.
Portulaca oleracea, 589.
Potato leak, 1231.
Potatoes: Hibernation of *Phytophthora infestans* in the Fresh Potato, 119, 120, 121, 688. *Ph. infestans*, *Alternaria Solani* and *Actinomyces chromogenus* on Potatoes in Cuba, 121. Bacterial Rot of Stored Potato Tubers, 122. Species of the Genus *Rhizoctonia* injurious to in India, 123. Researches on the Germination of the Late Blight of Potato (*Ph. infestans*), 245. *Spongospora subterranea* ("Powdery Scab of Potatoes") in Oregon, 246. *Eurydema oleracea*, 257. Report on Diseases of Agricultural Plants in Denmark, in 1914, 568. Vegetable Parasites of, in Russia, 688. *Agrotis segetum*, Beet and Potato Pest in Germany, 713. On the Original Range of *Spongospora subterranea*, 807. Studies on the Amylase in Healthy Potatoes and in those suffering from "Leaf Curl", 924. Means of Control of *Chrysophlyctis endobiotica*, a Potato Pest in Germany, 938. Potato Disgases in the Dutch East Indies, 940. Economic Data relating to the Treatment of Potatoes with Bordeaux Mixture against *Alternaria Solani*, 1032. Researches on the Silver scurf Disease (*Spondyliocladium atroviscus*) of the Potato, 1034. Investigations on the Formation of Cracks in Potato Tubers, 1124. Effect of Certain Species of *Fusarium* on the Composition of the Potato Tuber, 1129. *Fusarium radicolola*, the Cause of Rot in Potato Tubers in the United States, 1130. *Epilachna dieget*, potato ladybird beetle, 1147. On the Reappearance of Mildew (*Ph. infestans*) in the Haulm of the Potato, 1230. The Disease of Potatoes Known as "Potato Leak" caused by *Rhizopus nigricans* and *Pythium de Baryanum*, 1231. *Fusarium oxysporum* and *F. trichothecioides* in their Relation to Tuber-rot in Potatoes, 1232. On the Appearance of Cryptogamic Diseases in Soils Cultivated with Potatoes for the First Time and Sown with Healthy Tubers, 1331.
Powdery grayrot, (*Fusarium Solani*), 1332.
Powdery scab of potatoes, 246.
Prays citri, 1137.
Prevention and Control: Frost Protection for Fruit and Vegetables in the United States: Treatment

of Weeds Infesting Corn Crops by Means of Sulphuric Acid, 128. Sterilisation of Seeds by Calcium Hypochlorite as Means of Controlling the Diseases Spread by Seeds, 241. Researches on the Germination of the Late Blight of Potato (*Phytophthora infestans*), 245. On a Cryptogamic Disease of the Fruit-bearing Branches, of the Raspberry, 249. Researches on Vine Mildew, Favourable Time for Treatment, 250. *Crioceris melanopa*, 254. Control of *Eurydena Oleracea*, in Sweden, 257. *Leucopholis rorida* in Manioc Plantations, 258. *Hyllobius abietis* and means of control, 261. Entomophagous Insects and their Practical Employment in Agriculture, page 321. Club-root (*Plasmodiophora brassicae*) in New Zealand, 358. *Puccinia suarcolens* as a Check on the Spread of *Citrus aroensis*, 364. Queensland Government Enquiry into Means of Controlling Prickly-Pear, 365. Kainit as a Means of Destroying Weeds, 366. *Oencyrtus pacificus*, a New Egg Parasite from Fiji, 367. *Chilocorus bipustulatus* and *Exochomus quadripustulatus* as Natural Control of Injurious Scale Insects, 368. *Paraleptomastix abnormis* a New Chalcidoid Parasite of the Citrus Mealy Bug *Pseudococcus citri*, 369. Woodpeckers and their Relation to Forestry in the British Isles, 370. The Effect of Various Dressing on Pruning Wounds of Fruit Trees, 371. Control of the Citricola Scale (*Coccis citricola*) in California, 377. Mites injurious to Various Wild and Cultivated Plants in Sweden, 379. Insects injurious to Timber in Sweden, 381. Diseases and Pests of the Cranberry, *Oxycoccus (Vaccinium) macrocarpus*, in the United States, 470. *Sclerotinia Linhartiana* on Quince, 474.

The Asparagus Beetle Egg Parasite, 477. *Ceratitis capitata*, 484. *Thyridopteryx ephemerae-formis* an injurious Shade-Tree Insect, 485. Comparative Experiments in Austria on the Control of Field-Voles, 486. Manganous sulphate as a remedy for "Dörrfleckenkrankheit", 568. A New Method of Selecting Tomatoes for Resistance to the Wilt Disease, 573. Experiments on the treatment of cereal seeds for the control of "Bunt" and "Smut" and also for keeping off Birds, 574. Experiments on the Prevention of *Ustilago Avenae*, 575. Control Experiments against *Ustilago bromizora* and *Ustilago perennans*, 576. Sulphur-lime mixture as a substitute for Bordeaux Mixture in controlling certain Fungi parasitic on Fruit-Trees, 577. Brown Blight of Tea, 582. Control of Injurious Aphids by Ladybirds in Tidewater, Virginia, 594. Natural Enemies of Sugar cane Borers in Java, 595. The Effect of Cyanide on the Locust borer (*Cyrtene robiniae*), injurious to the Locust-tree, 596. The Life History of *Exosaurus deformans* and Preventive Treatment, 692. Action of Copper Sulphate on Vine Mildew, 693. Experiments for Control of *Ranunculus arcensis*, 705. *Prospaltella berlesii* against *Diaspis pentagona* in Piedmont in 1915, 707. The Life History and Control of the Vine-Moths, *Conchylis ambigua* and *Polychrosis botrana*: Observations made in 1914 by the Plant Diseases Observatory of Turin, Italy, 708. Tobacco Juice for the Treatment of the Vine-Moths *Polychrosis botrana* and *Conchylis ambigua* in Piedmont, 709. Method of Cockchafer Control used in Germany, 710. Destruction of the Tobacco Beetle (*La-*

- sioderma servicorne*), 711. The Catalpa Sphinx (*Ceratonia catalpae*), 716. Investigations into a Disease of the Cones of *Pinus Pinea* in Italy, 819. *Diplogaster labiata* n. sp. and *D. aerinora* n. sp., Nematode Parasites of *Saperda tridentata* and *Leucotermes lucifugus* in Kansas, 826. The Efficacy of *Aphelinus silvestrii* in Control of *Chrysomphalus dictyospermi* in Sicily, 827. Efficacy of Various Arsenical Preparations in Control of Insect Pests, 828. The Efficacy of Hot Water Treatment against "Cochylis" and "Endemism", 829. Bridge Grafting for saving Fruit Trees with Injuries due to Animals or Mechanical Causes, 830. Prophylaxis in Vegetable Pathology, 937. Means of Control of *Chrysophytis endobiotica*, a Potato Pest in Germany, 938. *Aspidiotiphagus citrinus*, Endoparasite on *Chrysomphalus dictyospermi* in Italy, 948. An undetermined Nematode Worm Parasitic on Aphids, 949. Nicotine Products tried in Germany against "Cochylis" and "Endemism", 950. Seed Sifting as a Means of controlling Fungous Diseases, 1031. Economic Data relating to the Treatment of Potatoes with Bordeaux Mixture against *Alternaria Solani*, 1032. Experiments in Locust Control by Means of *Coccobacillus acridiorum* in Argentina, 1044. *Spicaria Cossus* n. sp., a Hyphomycete isolated from the Larva of "Cossus Rougebois", 1045. A Form of *Borlytis bassiana* isolated from the Larva of the Macrolepidopterous *Nonagria typhae*, 1046. The Successful Treatment with Insecticides of Plants in Flower, 1047. Unspotted Tentiform Apple Leaf Miner (*Ornix geminata*) a Microlepidopterous Pest of several Fruit Rosaceae in America, 1050. Terrapin Scale (*Eulecanium nigrofasciatum*), 1053. *Anastrepha serpentina*, a Dipterous Injurious to Several Fruit Plants in Brasil, 1054. The Control of Field Voles in Italy, 1056. *Phytophthora* sp., as the Cause of Black Thread Disease of *Hevea brasiliensis* in Burma, 1131. Observations on the Insect Parasites of Some Coccidae, 1139. *Aphicus hesperidium* n. sp. an Ectophagous Parasite on the Cochineal of Citrus Fruits, *Chrysomphalus dictyospermi* in Spain, 1140. *Hyperaspis binotata*, a Coccinellid Beetle Predatory on *Eulecanium nigrofasciatum* ("terrapin scale"), 1141. *Holcocera iceryacella* a Lepidopteran that Destroys Cochineal Insects in California, 1142. *Dacus vertebratus*, 1151. Diseases and Insect Pests which Attack Rice in Java, 1229. Natural Enemies of Insect Pests, 1243, 1244, 1245, 1246. Prevention of the Hessian Fly (*Cecidomyia destructor* = *Mayetiola destructor*) in Kansas by Choice of the Season for Wheat Sowing, 1247. Patents concerning Preventive Measures against Plant Diseases and Pests, 1330. Studies concerning the Application of Hydrocyanic Acid as an Insecticide, 1342. Experiments concerning the destruction of *Lepidiotia albokirta*, a Coleopterous Pest on the Sugar Cane in Queensland, 1343. *Pristomeridia agilis*, 470. *Prodenia littoralis*, 601. *Prodenia litura*, 590. *Profenusa collaris* n. g. and n. sp. ("Cherry and hawthorn sawfly leaf miner"), 375. Prophylaxis in Vegetable Pathology, 937. *Prosopalla*: *P. berlesesi* against *Diaspis pentagona*, page 323, 707. *P. lounsburyi*, 1140. *Pseudonidia quadriareolata*, 824.

Pseudococcus: *P. bakeri*, 1142. *Pseudococcus citrii*, *P. bakeri*, *P. citrophilus* and *P. longispinus* in the Citrus Plantations of Southern California, 835. *P. citri* attacked by *Paraleptomastix abnormis*, 369. *P. obscurus*, 365. *P. vitis* in Argentine, 135. *Pseudococcus Walkeri* and *P. spp.*, 706. *Pseudococcus* sp. on Maize in Porto Rico, 129. *P. spp.* in Zanzibar, 591.

Pseudopeziza Medicaginis, 1228.

Pseudotsuga: *Polyporus Schweinitzii* injurious to Conifers in Great Britain, 584. Parch blight on *Pseudotsuga* in Oregon, 805.

Psyllidae in Cleveland (England), 476.

Psylliodes attenuatus, 823.

Ptilinus pectinicornis, 381.

Puccinia: *P. constricta* in Russia, 462.

New record of *Puccinia Galanthi* in Austria, 464. *P. glumarum*, 354.

P. Helianthi, 1127. *P. iridis*, 471.

Puccinia suaveolens, against *Cnicus arvensis*, 364. Effect of the Destruction of the Barberry on the Common "Rust" of Wheat, 353. Vegetable Parasites in Russia, 688. Experiments on the Wintering of the Teleutospores of "rust" in Grasses, 1126.

Pulexinaria: *P. amigoni*, 591. *P. fluctifera*, 1145. *P. psidii*, 592. *P. vitis*, page 327, 200.

Pyrausta nubilalis, 823.

Pythium de Baryanum, 1231.

QUEENSLAND: Queensland Government Enquiry into Means of Controlling Prickly-Pear, 365. *Allernanthera Achyrantha*, Khaki Weed, 1041. Insect Pests of the Sugar-cane in Queensland Australia, 1048.

Quercus, see Oak.

Quince: *Sclerotinia Linhartiana* on Quince, new to Bulgaria, 474. Insect Pests in British East Africa, 1240.

Quinine: The Bad Effect of Frost on in Java, 1326.

RABBITS: (*Lepus cuniculus*) Injurious to Forests in Hungary, 263.

Radish: Insects Pests of, in Porto Rico, 129. *Plasmodiophora Brassicae* on, 358.

Ramularia: *R. Epilobii-rosei*, 349. *R. oreophila*, 462. *R. sambucina*, 1327.

R. trachystemonis, 463.

Ranunculus Ficaria and *Ranunculus fascicularis*, host plant of *Peronospora Ficariae*, 119.

Raphanus Raphanistrum, 366.

Rapistrum rugosum ("turnip weed") 587.

Rapissugaren, 257.

Raspberry: On a Fungoid Disease of the Fruit-bearing Branches of the Raspberry in Switzerland, 249.

Rat Plagues in the Bombay Presidency, 264.

Razoumofskyia spp., Mistletoes injurious to conifers in the United States, 1135.

Recurvaria nanella, microlepidopteron injurious to Fruit Trees in Italy, 602.

Red boll worm (*Dipropops casana*), 590.

Resistance of plants to diseases: Selection Experiments with Timothy Grass, 289. The Specific Resistance of certain Gramineae to several Species of Uredinaceae and Ustilaginaceae, 354. Control of Cabbage Yellows through Dispage resistance, 355. Varietal Resistance of Plum to Brown-rot, 356. Sugar Canes Resistant to Root-rot and Maize Resistant to Insect Attacks, in Cuba, 106. A New Method of Selecting Tomatoes for Resistance to the Wilt Disease, 573. On the Susceptibility of *Phaseolus vulgaris* and *P. multiflorus* to Bean Rust (*Uromyces appendiculatus*) and other Fungoid

- Diseases, 933. Tobacco resistant to *Thielavia basicola*, 934. Resistance of *Pyrus calleryana* to Necrosis of the Bark and Branches (*Bacillus amylovorus*), 935. Resistance of Different Varieties of Wheat to *Mayetiola destructor* in America, 947. Breeding Experiments with a View to Obtaining a *Helianthus* Resistant to "rust" (*Puccinia Helianthi*), 1127. The Resistance of Lucerne to *Pseudopeziza Medicagoe* in Uruguay attributed to the Use of Nitragin, 1228.
- Rhabdospora Lappae*, 570.
- Rhammus*, vegetable parasites of, in Russia, 688.
- Rhizichius lophanthæ*, page 325.
- Rhizobius ventralis*, page 326.
- Rhizococcus multi-spinosus*, 365.
- Rhizoctonia*: Species of the Genus *Rhizoctonia* Injurious to Plants Cultivated in India, 123. Behaviour of Different Forms of *Rhizoctonia violacea*, 689.
- Rhizopus nigricans*, 696, 1231, 1235.
- Rhodes grass (*Chloris Gayana*), 1333.
- Rhodesia: *Striga lutea* parasite of maize, 1040.
- Rhododendron ponticum*, 239.
- Rhodosticta onobrycnidis*, 462.
- Rhogas: *R. collaris*, 381. *Rhogas esenbeckii*, 136. *Rhogas* (?) parasite of *Earias*, 590.
- Rhopobota vacciniæ*, 470.
- Ribes*: Vegetable parasites of, in Russia 688. *Crenarium vibicola* parasitic on, in Ontario, 941. *Epochra canadensis*, a Pest of, in America, 954.
- Rice: Insects Injurious to, in Mauritius, 252. Pests and Diseases of, in the Dutch East Indies, 253. Some injurious Indian Weevils, 589. Thrips n. sp. Injurious to, in India 598. *Triaenodes bicolor* and *Hymenocampa nymphaeata*, 831. Diseases and Insect Pests of, Rice in Java, 1229. Animal Pests of, in Java, 1248.
- Rice weevil (*Calandra oryzae*), 252.
- Ring Worm, 470.
- Ripersia resinophila* n. sp., a coccid injurious to *Pinus longijolia* and to *P. excelsa* in the Himalayas, 606.
- Rocky Mountains hair Wood pecker (*Dryobates villosus monicola*), 262.
- Roestelia Koreanensis*, 703.
- Rose: Mites injurious to, in Sweden, 379. Report on some Coccidae from Zanzibar, 591. Animal Pests of, in New South Wales, 601. Vegetable Parasites of, in Russia, 688.
- Rots, storage of Economic Aroids, 1332.
- Roumania: *Phlyctenodes sticticalis*, Microlepidopteron injurious to Tobacco in Roumania, 480. *Orobancha ramosa* and *O. cumana*, Parasites of, Tobacco in Roumania, 586.
- Rubenschwanziäule, 238.
- Rubus Idaeus*, 379, 688.
- Rumex Acetosa*, host plant of *Peronospora Rumicis*, 119.
- Ruscus aculeatus*, 571.
- Russia: "Pumago" in the Department of Sotski (Caucasus), 239. *Hyalobius abietis* and the Means Employed against it, from the Observations Made in 1913-14 in the Province of Orel, Russie, 261. Contribution to the Mycological Flora in the Neighbourhood of Kieff, Russia, 461. Contribution to the Mycological Flora of the District of Tersk (Caucasus), 462. Contribution to the Mycological Flora of the District of Suchum (Russia), 463. Appearance of Swarms of *Contarinia tritici* in, South Russia during 1914, 478. Insects Injurious to Pine trees, 605. Insects injurious to Flour and Grain in the Province of Ekaterinoslav (South Russia), 607. Vegetable Parasites of Cultivated

- or Useful Plants observed in 1913 in the Government of Tula, Russia, 688. Investigations in 1914 on the Weeds occurring in the Government of Kherson, Russia, 704. *Septoria* spp. injurious to Celery in the Neighbourhood of Petrograd, 816. The Entomological Society of Moscow, Russia, 822. Insect Pests of Plants Cultivated in European Russia, in 1914, 823. Animal Pests on Cultivated Plants Observed by the Entomological Bureau of Stavropol in 1914, 1239. The Plague of Voles and its Sudden Disappearance in the District of Ouman, Kiev, Russia in 1915, 1351.
- Rust: Effect of the Destruction of the Barberry on the Common "Rust" of Wheat in Denmark, 353. On the susceptibility of *Phaseolus vulgaris* and *P. multiflorus* to, 933. Experiments on the Wintering of the Telentospores of "Rust" in Grasses, 1126. The susceptibility of *Phaseolus vulgaris* to haricot rust, 1227. On Specialisation in parasitic Fungi with special reference to the Specialisation of Rust on Cereals, 1328.
- Rutherglen bag (*Nyssius vinifol*), 1049.
- Rye: A Fungus of Uncertain Systematic Position occurring on Wheat and Rye in the Salt Lake Valley, 578. Vegetable Parasites of, observed in 1913 in the Government of Tula, Russia, 688. Changes in the Chemical Composition of Rye Seed due to the Action of Certain Forms of *Fusarium*, 808. Insect Pests of in Russia, 823. *Chortophila cilicrura* and *Thereva* sp. Pests on Rye in Germany, 1146. The Effect of Frost on the Roots of Rye, 1325.
- SAFFRON: *Meligethes aeneus* on, 823.
- Saissetia: *S. hemisphaerica*, 129. *Saissetia oleae*, page 326, 368, 592, 1142. Notes on Samoan Coccidae, 592.
- Salix: *S. nigricans*, 349. *Psyllidae* in Cleveland (England), 476. Vegetable Parasites of, in Russia, 688. *Salicidae* injurious to Pine Trees, 136. *Sambucus racemosa*, 688.
- Samoa: Notes on Samoan Coccidae, 592. Ordinance relating to Insect Pests and Diseases of Plants in Western Samoa, 683.
- Sandal: "Spike Disease" of, in India, 687.
- Saperda tridentata*, 826.
- Sarcophaga* spp., 136.
- Sarcophaga cimbicis* and *S. hunteri* page 331.
- Sasa ramosa*, 60.
- Saw-toothed grain beetles (*Sylvanus* spp.) 252.
- Scapteriscus diductylus*, in Porto-Rico, 129.
- Schedius Kuwanae*, page 330.
- Schinus Molla*, 1149.
- Schizoneura lanigera*, 133, page 338, 601.
- Scirpophaga intacta*, 595.
- Scirrhia Bambusae*, 817.
- Sclerospora macrospora*, 1128.
- Sclerotinia*: *S. cinerea*, 356. Pathogenicity and Identity of *Sclerotinia libertiana* and *S. similacina* c. Ginseng, 359. *Sclerotinia Libertiana*, Injurious to *Forsythia viridissima*, 942. *Sclerotinia Libertiana* dangerous to Citrus and other plant cultivated in California, 1037. *Sclerotinia Linhartiana*, 474. Vegetable Parasites in Russia, 688. Brown rot, 702. Morphology and Conditions of Development of the "Sclerotium Disease of Clover" (*Sclerotinia trifoliorum*), 811. Researches on Blight in Seedlings with Special Reference to those of *Brassica*, 1336.
- Sclerotium bataticola*, 696.
- Sclerotium Rolfsii*, 1229, 1332.

- Sclerotium Tuliparum*, 118.
Sclerotium rot (*Sclerotium Rolfii*). 1332
Scolecotrichum graminis, 1028.
Scoparia dulcis, host plant of *Rhizoctonia Napi*, 123.
Scutellista spp., page 326.
Scymnus, page 327.
Selandria cerasi, 601.
Senapsbaggen (*Phaedon cochleariae*), 373.
Senecio vulgaris, 366.
Septogloeum Pastinacae, 570.
Septogloeum Ulmi, 462.
Septoria: *S. Adenocaulonis* and *S.* spp. in Canada, 1030. *S. Apii* var. *Magnisiana* and *S. Apii-g. aveolentis* n. sp., injurious to Celery in the Neighbourhood of Petrograd, 816. *S. bataticola*, 696. *S. cruciatae*, 462. *S. Digitalis*, 349. *S. fuscomaculans*, 349. *S. oxyspora*, 1327. *S. Petroselinii* var. *Apii*, 468, 499. Contribution to the Mycological Flora of the District of Tersk (Caucasus), 462. Vegetable Parasites in Russia, 688.
Serangium spp. page 327.
Sesamum indicum host plant of *Rhizoctonia Solani*, 123.
Sesia brunneri, 262.
Setaria germanica, 823.
Seythropus mustella, 136.
Shu-Shu, 591.
Signifera nigrita, page 328.
Signiphora Merceti n. sp., a Natural Enemy of the Cochineal Insect *Chrysomphalus dictyospermi* in Spain, 1245.
Silpha opaca, 568.
Silvanus surinamensis, 607.
Silvanus signatus, 252.
Sinapis arvensis, 366.
Sisymbrium Irio, 1042.
Sisymbrium officinale, 358.
Siona lineata, 823.
Smilacina racemosa, 359.
Smoke: Injury caused by, to Vegetation in Grounds near Ironworks at Terni, Italy, 566.
Society, Entomological, of Moscow, Russia, 822.
Soft-rot, 1332.
Solanum Melongena, *S. tuberosum*; host plants of *Rhizoctonia Solani*, 123.
Solanum triflorum, 1042.
Solenopsis geminata, 129, 479.
Solenopsis molesta, 132.
Somaliland: "Sordago" disease in the "Marvel of Peru", 686. Diapids collected in Southern Italian Somaliland, 824.
Sonchus, 366, 462.
Sooty blotch (*Leptothyrium carpophilum*), 473.
Sorbus Aucuparia, 688.
Sorgho: Sorghum midge, 294. *Calocoris angustatus* a Capsid injurious to Sorgho, in India, 712. Diseases of *Sorghum vulgare* in Natal, 1333. *Sorosporium Simii* on *S. halepensis*, 1334.
Sorosporium Simii, 1334.
Soudan grass, (*Sorghum vulgare*), 1333.
Sour scab, 928.
South Africa: Vine Diseases, page 7.
Notes on Some South African Mistletoes and their Hosts, 125. The Potato Ladybird Beetle (*Epilachna diegei*), a Coleopterous Pest on Potatoes and other Plants in South Africa, 1147. Lepidopterous Pest on the Pseudo-Pepper Tree in the Transvaal, 1149. *Dacus vertebratus* a dipterous which is Harmful to Cucurbitous Plants, 1151. Coleoptera harmful to fruit and to flowering plants cultivated in South Africa, 1152. Coleopterous Pest on the Peach Tree, 1153. *Parasa latistriga*, a Lepidopterous Pest on Various Trees, 1154. Diseases of Some Forage Plants in Natal, 1333. *Sorosporium Simii* n. sp.,

- a Parasite on *Sorghum halepense* in Natal, 1334.
- Soya : Fungi parasitic on, in Russia, 463.
- Spain : *Bombyx pini*, a Spanish Pest of Pine, 838. Measures to prevent Injury by Frost in Catalonia, Spain, 922. Mildew of Cereals in, 1128. *Aphiscus hesperidum* n. sp., an Ectophagous Parasite on the Cochineal of Citrus Fruits *Chrysomphalus dictyospermi* in Spain, 1140. *Signiphora merceli*, 1245.
- Span worm (*Epelis truncataria* var. *faxonii*), 470
- Spathius clavatus*, 381.
- Spergula arvensis*, 366.
- Spermophilus*, 1239.
- Sphaeronema fimbriatum*, 696.
- Sphaeropsis necatrix*, 819.
- Sphaerulina suchumica*, 463.
- Spicaria Cossus*, n. sp., a Hyphomycete isolated from the Larva of "Cossus Rongebois" (*Cossus Cossus*), 1045.
- Spikedisease of Sandal in India, 687.
- Spinach : Vegetable Parasites of, in Russia, 688. *Pegomyia hyoscyami* Harmful to, 1150. Researches on Blight in Seedlings, 1336.
- Spinach aphid, 594.
- Spinacia oleracea*, host plant of *Pero-nospora effusa*, 119.
- Spiny pest-pear (*O. dillemii*), 365.
- Spiraea Aruncus*, 349.
- Spondylocadium atrovirens*, 1034.
- Spongospora subterranea* on Potatoes in the United States, 246, 807.
- Sporobolus indicus*, 1333.
- Spotted ladybird (*Megilla maculata*), 394.
- Spring grain aphid (*Toxoptera graminum*), 597.
- Squash : Insects injurious to, in Porto Rico, 129.
- Stachys arvensis*, 1136.
- Stagonospora Crepidis*, 462.
- Stagonospora arvensis*, 1136.
- Staphylea colchica* attacked, by *Tripo-sporium tenue*, 239.
- Staphylinid Injurious to Turnips in France, 482.
- Stellaria media*, 119, 366.
- Stem rot (*Fusarium* spp.), 696.
- Stereum hirsutum*, 461.
- Stereum subpileatum*, 475.
- Sticky timber pholiote (*Pholiotia ad-posita*), 810.
- Stilbella Heveae*, 1234.
- Strawberries : Vegetable Parasites of, in Russia, 688. *Botrytis* sp. and *Rhizopus* sp. as the cause of Rot in Straw-berries in the United States, 1235.
- Stretta of Wheat, 923.
- Striga lutea*, parasite of maize in Rhod-esia, 1040.
- Stylopodia picta*, 365.
- Sugarcane : Resistant to root rot, 390.
- The Influence of Rainfall and the Non-Burning of Trash on the Abundance of *Diatraea saccharalis*, Injurious to the Sugar Cane, 479.
- Natural Enemies of Sugarcane Bor-ers in Java, 595. Fungoid Diseases of the Sugarcane at Tucuman, 813.
- Ligyris fossator* and *L. fossor*, Coleoptera attacking Sugar Cane, in Brazil, 833. Insect Pests of the Sugar-cane in Queensland, 1048. Experi-ments Concerning the Destruction of *Lepidota Albohirta*, a Coleop-terous Pest on the Sugar Cane in Queensland, 1343.
- Sulphate of iron as a means of destroy-ing weeds, 366.
- Sulphuric acid : Treatment of Weeds in-festing Corn Crops with, 128. Treat-ment of Cereal Seed for the Control of "Bunt" and "Smut", 574.
- Sunflower : Insects pests of, in Russia, 823.
- Surinam : "Witch Brooms" on the Cocoa-tree in, 124.
- Suthui (*Dioscorea* sp.), 122.
- Sweden : *Apamea testacea*, Injurious to Forage Plants in, 266. *Eurydema ole*

- racea*, Injurious to Several Plants in Sweden, 257. Species of *Hyponomeuta*, Injurious to *Lonicera* and *Prunus* in Sweden, 259. Insects Injurious to the Horseradish in, 373. Mites Injurious to Various Wild and Cultivated Plants in Sweden; 379. Insects injurious to Pine and Fir Trees in, 380. Insects Injurious to Timber in, 381. Behaviour of Different Forms of *Rhizoctonia violacea*, 689.
- Sweet Potato, 129, 580, 696, 697.
- Sweet potato scab (*Monilochaetes in-juscans*), 580.
- Switzerland: On a Cryptogamic Disease of the Fruit-bearing Branches of the Raspberry in, 249.
- Sylepta derogata*, 590.
- Sylvilagus* sp. ("cottontail rabbits")
- Sympiesis* spp. natural enemies of *Ornix geminata*, 1050. In United States, 1156.
- Syneta albida*, 702.
- Syringa vulgaris*, 688.
- Tachinidae* spp., 955.
- Tachycines asyna morus*, 1242.
- Talis quevella*, 823.
- Talpochares cocciphaga*, page 327.
- Tamarix indica*, 589.
- Tapinostola muscosa*, 823.
- Taraxacum officinale*, Weed in New Zealand, 363.
- Taxus baccata*, 239.
- Tea: Pest and Diseases of in the Dutch East Indies in 1914, 253. Brown Blight of, (*Colletotrichum Camelliae*) in India, 582. Insects injurious to, in India, 1137.
- Tena anartoides*, 601.
- Teles laeviusculus*, 136.
- Telenomus* sp., 595.
- Telenomus ashmeadi*, page 331.
- Tenebrio molitor*, 607.
- Tenebroides corticalis*, 131, 132.
- Tenebroides mauritanicus*, 607.
- Termites (*Leucotermes* spp.) Harmful to Agriculture in the United States, 826, 1144.
- Terrapin scale (*Eulecanium nigro-fascia.um*), 1053, 1141.
- Tetramorium cespitum*, 481.
- Tetraneura rubra*, 823.
- Tetranychus*: On *Cactus* and *Opuntia*, 365. Mites injurious in Sweden 379.
- Tetragastis asparagi* 471.
- Teucrium* sp. 462.
- Thanaton, 254.
- Thereca* sp., 1146.
- Theronia atalanta*, 136.
- Thielavia basicola*, 699, 934.
- Thomasiidae* injurious to Pine-trees, 136.
- Thrips: *T. (Bugnallia) oryzae* n. sp.; injurious to rice in India, 598. *T. tabaci* in Porto-Rico, 129.
- Thyridopteryx ephemeraeformis*, 485.
- Tilia Europea*, 361, 379, 462, 688.
- Tilletia*; *T. horrida*, 253, 1229. Experiments on the Treatment of Cereal Seeds for the Control of "Bunt" and "Smut" and also for keeping of Birds, 574. Vegetable Parasites in Russia, 688. Experiments on Smut-resisting Powers of Different Varieties of Wheat, 809.
- Timber: Insects Injurious to Timber in Sweden, 381. Agariciniae attacking Wood, 820.
- Tinea cloacella*, Injurious to Dried Edible Mushrooms, 483.
- Tinea* spp., 1229.
- Tobacco: *Nicotiana Tabacum*, host plant of *Rhizoctonia Solani*, 123. *Phlyctaenodes sticticalis*, 480. *Orobancha ramosa* and *O. cumana*, Parasites of Tobacco in Roumania, 586. Insects Injurious to, in the Nyassaland Protectorate, 590. Destruction of the Tobacco Beetle (*Lasioderma serricornis*), 711. The Selection of Types of Tobacco Resistant to *Thielavia basicola*, in America, 934. Tobacco Diseases and Pests in Eastern Java, 967.

- Tobacco stem caterpillar (*Phth. rimaeca heliopa*), 590.
- Tolyposporium Chloridis*, 1333.
- Tomatoes: Insects injurious in to, Porto-Rico, 129. A New Method of Selecting Tomatoes for Resistance to the Wilt Disease, 573. Vegetable Parasites of, in Russia, 688. Diseases of Undetermined origin affecting the Tomato in Ontario, 925.
- Tomocera californica*, page 326.
- Top-rot, 813.
- Torix* spp., 590.
- Toxoptera graminum*, 597.
- Toxoptera* spp., 823.
- Trachea basilinea*, 823.
- Thachystemon orientalis*, 463.
- Trametes Pini*, 461.
- Triaenodes bicolor* and *Hydrocampa nymphaeta* in the Rice Fields of the Province of Milan, Italy, 831.
- Tribolium confusum*, 607.
- Tribolium ferrugineum*, 252.
- Trichochrous texanus*, 365.
- Trichoderma Koeningi*, 943.
- Trichogramma*: *T. carpocapsae*, page 330. *Trichogramma minutum*, 375, 470, 479, 595. *Trichogramma* spp., 595.
- Trichogrammatolea nana*, 595.
- Trinidad: A new Coccid Pest of Cacao in, 599. *Corticium salmencolor* of Cacao in the Island of Trinidad, 1132.
- Trioxa urticae*, 476.
- Tripasporium tenue* on *Rhododendron ponticum*, 239.
- Trithionyx*, page 328.
- Triticum repens*, 349.
- Trombidium fuliginosum*, 130.
- Trypanotylus ruficornis*, 823.
- Tulips: On the "Breakage" of Tulips, 118.
- Tunis: Concerning the Fruit Fly, 1155.
- Turnip: *Rhizoctonia Napi* in India, 123. Insects affecting on, in Porto-Rico, 129. *Eurydema oleracea*, on 257. Staphylinid injurious to, in France, 482. Report on Diseases of Agricultural Plants in Denmark in 1914, 568.
- Turnip weed, (*Rapistrum rugosum*), 587.
- Tychius quinquepunctatus*, a coleopterous Pest of Beans in Apulia, Italy, 832.
- Tyndarichus navar*, page 330.
- Typhaeus fuscipes*, 381.
- Typhlocyba comes*, 1350.
- UMFALLEN DER TULPEN, 118.
- Uncinula necator*, 1350.
- United States: Parasitism of *Cofandra umbellata*, in the, 126. *Phytophthora Cactorum* Disease of Ginseng in the, 119, 698. Dispersion of Gipsy-Moth Larvae by the Wind in the, 130. Life History of the Codling Moth in Maine, 131. Studies of the Codling Moth in the Central Appalachian Region, 132. A New Bacterial Disease of Western Wheat Grass (*Agropyron Smithii*), 242. *Pleosphaerulina* sp. a New Alfalfa Leaf-spot in America, 244. *Spongospora subterranea* in Oregon, 246. *Pinus rigida* and *P. arizonica* New Hosts of *Peridermium pyri-forme*, 251. The Zimmerman Pine Moth, 262. Prickly-Pears in the, 365. *Chilocorus bipustulatus* and *Exochorus quadripustulatus*, recently introduced from Italy into California as Natural Control of Injurious Scale Insects, 368. *Paraleptomastix abnormis*, a New Chalcidoid Parasite of the Citrus Mealy Bug, Introduced from Italy into California, 369. Cherry and Hawthorn Sawfly Leaf Miner, Injurious to Cherry and Hawthorn in North America, 375. A Honeycomb Heart Rot of Oaks Caused by *Stereum Subpileatum*, 475. The Pavement Ant (*Tetramorium cespitum*) as a Pest of Coldframe and Greenhouse

Crops in Virginia, 481. The Bagworm (*Trypodypteryx ephemeræ-formis*) an Injurious Shade-Tree Insect, 485. Di seases of various crops, in the, 578, 579, 580, 581. A Serious Disease in Forest Nurseries caused by *Peridermium filamentosum*, 585. The Spring Grain Aphid or "Green Bug" (*Toxoptera gymatinum*) in the, 597. *Agrilolimax agrestis* a Gastropod causing Injury in Market-Gardens in the State of New-York, 600. Sweet Potato Disease in the 696. Soilstain or Scurf (*Monilochaetes injuscans*) of the Sweet Potato, 697. Brown Rot (*Sclerotinia cinerea*) of Prunes and Cherries in North-West Region of the, 702. The "Catalpa Sphinx" (*Ceratomia catalpæ*), a Lepidopteron infesting *Catalpa catalpa* and *C. speciosa*, in the, 716. The "Cherry Leaf Beetle" (*Galerucella cavicollis*) a Fruit Tree Pest, in the, 718. Morphology and Biology of the "Green Apple Aphid" (*Aphis pomi*), in the, 719. Gummosis in the Citrus Plantations of Florida, 803. "Parch Blight" on Douglas Fir in Oregon, 705. On the Original Range of *Spongospora subterranea*, 807. Some Miscellaneous Economic Insects found in New Jersey, 825. *Diplogaster labiata* n. sp. and *D. ærivoræ* n. sp. Nematode Parasites of *Saperda tridentata* and *Leucotermes lucifugus*, in Kansas, 826. *Zenusa pyrina* a Dangerous Imported Insect Enemy of Shade Trees, 834. *Pseudococcus citri*, *P. bakeri*, *P. citrophilus* and *P. longispinus* in the Citrus Plantations of Southern California, 835. The Woolly Whitefly (*Aleurothrixus howardi*) in Florida Citrus Plantations, 836. *Icerya purchasi* in Florida, 837. Sour Scab of Citrus Plants in Florida, 928. Diseases and Enemies of *Diospyros virginiana* in the

931. *Trichoderma koeningi*, causing Root Rot of the Apple Tree in Virginia, 943. White Grubs (*Lachnosterna* spp.) in Wisconsin 946. Varigated Cutworm (*Peridroma margaritosa*), a Macrolepidopterous Pest of the Sugar-Beet in California, 953. *Diplodia* sp., a Melon Disease in the, 1036. *Sclerotinia liberiana*, a Disease of Citrus and other Plants Cultivated in California, 1037. Black Rot of the Vine in the, 1038. *Hypoderma deformans* attacking the Leaves of *Pinus ponderosa*, 1036. Woolly Pear Aphid (*Eriosoma pyricola* n. sp.), Injurious to the Pear Tree in California, 1051. *Galerucella cavicollis*, a Coleopterous Pest of Cherry and Peach Trees in the, 1052. Terrapin Scale (*Eulaecanium nigrofasciatum*), Injurious to the Peach Tree in America, 1053. *Fusarium radicola* the Cause of Rot in Potato Tubers in the, 1130. *Razoumofskyia* spp. Mistletoes Injurious to Conifers in the, 1135. *Holocera iceryocella*, a Lepidopteron that Destroys Cochineal Insects in California, 1142. The Termites (*Leucotermes* spp.), Harmful to Agriculture in the 1144. *Pulvinaria floccifera* and *Chrysomphalus dictyospermi*, Cochineal Insects Recently Established in California, 1145. *Agallia sanguinolenta* an Hemipteran Pest on Leguminous-Forage Plants, 1148. *Pegomyia hyoseyami*, a new Dipteran in the United States, Harmful to Spinach and other Plants, 1150. Cotton Rabbits (*Sylvilagus* spp.), 1156. *Botrytis (cinerea?)* and *Rhizopus (nigricans?)* as the cause of Rot in Strawberries in the 1235. The Green Lacewing Fly, (*Chrysopa californica*) a Natural Enemy of Insect Pests in the United States and in California, 1244. Prevention of the Hessian Fly, 1247.

- Uredinaceae: Observations on the "Dwarfing" of Barley and on the Specific Resistance of Certain Gramineae to several Species of Uredinaceae and Ustilaginaceae, 354.
- Urocystis occulta*, 688.
- Uromyces*: *U. appendiculatus*, 933, 1227. Vegetable Parasites in Russia, 688.
- Urophlyctis Alfatfæ*, 1232.
- Urtica urens*, 366.
- Uruguay: *Pulvinaria vitis* in, 260. Decree including the "Abrojo grande" among Weeds in, 684. The Resistance of Lucerne to *Pseudopeziza Medicaginis* in, 1228.
- Ustilaginoides virens*, 1229.
- Ustilago*: *U. Arrhenatheri* (= *U. dura*?) on French Rye Grass (*Arrhenatherum elatius*), 243. Control Experiments against *U. bromivora* and *U. perennans*, 576. *U. Shirciana* in Cuba, 360. Observations on the "Dwarfing" of Barley and on the Specific Resistance of Certain Gramineae to several Species of Uredinaceae and Ustilaginaceae, 354. Experiments on the Treatment of Cereal Seeds for the Control of "Bunt" and "Smut" and also for keeping of Birds, 574. Experiments for the Prevention of *Ustilago avenae*, 575. Vegetable Parasites in Russia, 688.
- Ustilina zonata* on *Hevea brasiliensis*, 812, 1124.
- VACCINIUM MACROCARPUS, 470.
- Venturia sterilis*, 813.
- Veratrum album*, 462.
- Vermehrungsschimmel, 1336.
- Veronica agvensis*, 366.
- Veronica hederæfolia*, 119.
- Vicia*: *V. hirsuta* attacked by *Rhizoctonia* spp., in India, 123. *Vicia sepium*, host plant of *Peronospora Viciae*, 119. Vegetable Parasites of, in Russia, 688.
- Vigna Catjang*, host plant of *Rhizoctonia solani*, 123.
- Vigna rubra*, 463.
- Vine: Vine Diseases in South Africa, page 7. Baco's Vine Hybrids in Charente, France, 69. The "White Cochineal of the Vine" (*Pseudococcus vitis*) in the Provinces of Mendoza and La Rioja (Argentina), 135. Researches on "Vine Mildew" Favourable Time for Treatment, 250. *Pulvinaria vitis* in Uruguay, 260. Mites Injurious to, in Sweden, 379. Animal Pests of in New South Wales, 601. Action of Cooper Sulphate on Vine Mildew, 693. The life History and Control of the Vine-Moths *Conchylis ambiguella* and *Polychrosis botrana*: observations made in 1914 by the Plant Diseases Observatory of Turin, Italy, 708. Tobacco Juice for the Treatment of the Vine-Moths *Polychrosis botrana* and *Conchylis ambiguella* in Piedmont, 709. Variation in the Resistance of Vines to Mildew, 810. *Haltica chalybea*, 987. The Possibility of Recovery of the Slips of a Vine suffering from "Bramble-Leaf", 1029. Black Rot of the Vine (*Guignardia Bidwellii*) attacking *Vitis rotundifolia* and *V. Munsoniana* (Muscadine Grapes) in the United States, 1038. Insect Pests of, in India, 1137. Birds in the Vineyards in the Region of Nîmes, 1143. Diseases that Attack Vines in Ontario, Canada, 1238. Rhynchosote Pests on Vines in Austria, 1349. Plant and Animal Pests on the Vine in Ontario, Canada, 1350.
- Viper's bugloss (*Echium vulgare*), 1340.
- Viscum*: Notes on Some South African Mistletoes and their Hosts, 125.
- Voles: Comparative Experiments in Austria on the Control of Field Voles, 486. Plague of Field-Voles in

- the Province of Kieff during 1914, 487. *Arvicola agrestis* in Denmark, 368. Measures for the Control of Field-voles in Apulia, 921. The Control of Field Voles in Italy, 1056. Animal Pests of cultivated Plants in Russia, 1239. The Plague of Voles and its Sudden Disappearance in the District of Ouman Kiev, Russia, 1351.
- WALLFLOWER, attacked by Clubroot, 358. •
- Walnut : *Ascochyta Juglandis* on, 349. Fungi parasitic on, in Russia, 462. *Mycosphaerella saccardoana* on old Leaves of, in Dalmatia, 571.
- Weeds : Weeds in Cultivation of Prickly Pear, 58. Notes on some South African Mistletoes and their Hosts, 125. Parasitism of *Comandra umbellata*, 126. Anatomical Determination of the Grains of Clover Dodder, 127. Treatment of weeds infesting corn crops by means of sulphuric acid, 128. In Scotland Upland grazings, 167. Comparative Researches on the Dimensions of the Seeds of Clover and Dodder, 362. Dandelion in New Zealand, 363. Californian Thistle Rust as a Check on the Spread of Californian Thistle, 364. Queensland Government Enquiry into Means of Controlling Prickly Pear, 365. Kainit as a Means of Destroying Weeds, 366. Turnip Weed (*Rapistrum rugosum* All.) in South Australia, 587. *Carrichtera annua*, a New Weed in Australia, 588. Decree Including the "Abrojo grande" (*Xanthium macrocarpum*) among Weeds in Uruguay, 684. Investigations in 1914 on the Weeds occurring in the Government of Kherson, Russia, 704. Experiments for Control of *Ranunculus arvensis*, a Weed infesting Wheat, in Touraine, 705. Goatsrue (*Galega officinalis*) a Weed in New Zealand, 821. *Cryptostemma calendulaceum*, *Crepis capillaris*, *Leontodon hirtus* and *Cardus* spp., Weeds in New Zealand, 944. Khaki Weed (*Alternanthera achyrantha*) in Queensland, 1041. Cutleaved Nightshade (*Solanum triflorum* Nut.) and London Rocket (*Sicymbrium Irio*), New Weeds in New South Wales, 1042. *Asphodelus fistulosus* and *Stachys arvensis*, Harmful Weeds in New South Wales, 1136. Seeds of Weeds and of Cryptogamic Diseases observed in Sowing Cereals from the Maritime Province of Eastern Siberia, 1237. An Attempt to Destroy Wild Mustard (*Brassica Sinapistrum*) in Fields of Cereals, 1238. *Xanthium canadense*, a New Weed in Southern Australia, 1339. *Echium vulgare* and *Phytolacca octandra*, Harmful Weeds in New Zealand, 1340.
- Western Wheat Grass (*Agropyron Smithii*), 242, 579.
- Wheat : *Triticum vulgare*, host Plant of *Rhizoctonia Napi*, 123. Treatment of Weeds Infesting Corn Crops by Means of Sulphuric Acid, 128. Insects Injurious to in Mauritius, 252. *Heteronix picilis* an Insect Pest in Australia, 255. Observations on the Dwarfing of Barley and on the Specific Resistance of Certain Gramineae to several Species of Uredinaceae and Ustilaginaceae, 354. Appearance of Swarms of *Contarinia tritici* in South Russia during 1914, 478. A Fungus of Uncertain Systematic Position occurring on Wheat and Rye in Salt Lake Valley, U. S. A., 578. Factors Contributing to the Lodging of Wheat, 685. Vegetable Parasites of in Russia, 688. A New Disease of Germinating Wheat caused by *Podosporiella* sp., in Salt Lake Valley, 694. Experiments for Control of *Ranunculus arvensis*

705. Experiments on Smut Resisting Powers of Different Varieties of Wheat, 809. Insect Pests in Russia, 823, 1239. Some Practical Means of Control of Wheat "Stretta" in the South of Italy, 923. Resistance of Different Varieties of Wheat to *Mayetiola destructor* in America, 947. The Physiological Races of *Erysiphe graminis* on Wheat and Oats, 1125.
- "Witch Weed" or "Rooi-Bloem" (*Striga lutea*), a Phanerogam parasitic on Maize in Rhodesia, 1040.
- Wilting: Researches on Blight in Seedlings with Special Reference to those of *Brassica*, 1336. The Index of Foliar Transpiring Power as an Indicator of Permanent Wilting in Plants, 23.
- Wind: Dispersor of Gipsy-Moth Larvae, 100.
- Wire grass (*Sporobolus indicus*), 1333.
- Wisconsin Hollander N. 8, resistant against the *Fusarium*, 355.
- Witte Topboorder, 395.
- Woodpecker (*Dryobates villosus monticola*), 252. Woodpeckers and their Relation to Forestry, 370.
- Woolly whitefly (*Aleurothrixus Howardi*), 830.
- Xanthium canadense*, 1339.
- Xanthium macrocarpum*, 684.
- Xanthorrhoe praefectata*, a Pest on New Zealand Flax (*Phormium tenax*) in New Zealand, 1344.
- Xanthosoma* sp. 129, 1332.
- Xestobium rufovillosum*, 385.
- Xyleborus solidus*, 601.
- YANTIA, 129.
- Yellow point disease, 568.
- Yucca gloriosa*, 701.
- Zabrus* spp., attacking wheat in Russia, 823.
- Zanzibar: Report on some Coccidae, 591.
- Zelleria oleastrella*, 715.
- Zenozera pyrina* ("leopard moth") a dangerous imported Insect Enemy of Shade Trees in the United States, 834.
- Zimmerman Pine Moth (*Pinipestis zimmermani*), 262.
- Zizyphus Oenoplia*, 687.
- Zophodia*, 365.
- Zukalia* spp., fungi which cause the production of "fumago", 230.
- Zygobothria bimaculata*, 130.

B) INDEX OF AUTHORS.

- ADANI, A. AND PETRI, L., 819.
 Aharoni, J., 1250.
 Ajrekar, S. L. and Shaw, F. J. P., 123.
 Ampola, G. and Vivenza, A., 566.
 Andrew, H. W., 587.
 Andrew, H. W. and Quinn George, 588.
 Anstead, Rudolph, D. and MacRae, W., 582.
 Arnaud, G., 460, 1233.
 Arphodes, 1128.
 Atkinson, E. H., 363, 944, 1340.
 ACK, E. A. AND PEMBERTON, C. E., 604.
 Bailey, F. D., 246.
 Bailey, J. F. and White, C. T., 1041.
 Baker, A. C. and Davidson, W. M., 1051.
 Baker, A. C. and Quaintance, A. L., 1241.
 Baker, A. C. and Turner, W. J., 719.
 Baker Collins, Frank, 600.
 Ballard, E., 712.
 Ballat, J., 828.
 Belgrave, W. N. C., 814.
 Benschel, G. E., 953.
 Berlese, Antonio, page 321.
 Bernard, Ch., 1326.
 Bernatsky, J., 127.
 Blakeslee, E. B. and Brooks, F. E., 132.
 Bodnar, J., 238.
 Boldirev, V. F., 822.
 Borodawski, P., 605.
 Brodine, D. N., 478.
 Bresadola, G., 570.
 Brierley, W. B., 1133.
 Briggs Jensen, C. A., Lyman, J. and McLane, J. W., 1225.
 Brittain, W. H. and Gooderham, C. B., 717.
 Brooks, Ch. and Fisher, D. F., 702.
 Brooks, F. E. and Blakeslee, E. B., 132.
 Brunner, J., 262.
 Bryan, Mary, Katherine and Smith, Erwin, F., 467.
 Bubák Fr. and Kabát F. E., 349.
 CARDIN, P. and JOHNSTON, JOHN R., 1347.
 Caesar, L. and Howitt, J. E., 1350.
 Champion, G. C., 1346.
 Charlemann, Z., 487.
 Chavanne, Juan J., 813.
 Cheel, Edwin and Cleland, J. Burton, 820.
 Chittenden, F. H. and Howard, J. O., 485, 716, 834.
 Clausen, Curtis P., 835.
 Cleare, L. D. JR., 378.
 Cleland, J. Burton and Cheel, Edwin, 820.
 Clifton, E., 951.
 Cockayne, A. H., 358, 364, 821.
 Collinge, Walter E., 370.
 Collins, C. W., 130.
 Comes, Orazio, 937.
 Coons George, Herbert, 572.
 Correns, C., 686.
 Cory, E. N., 1150.
 Crabill, C. H., 350, 943.
 Cushman, R. A. and Isely, Divight, 1052.
 DASTUR, I. F., 1131.
 Davidson, W. M. and Baker, A. C., 1051.
 Davis, J. John, 949.
 Davis, J. J. and Satterthwait, A. F., 1345.
 Deakin, R. H., 1240.
 Dearness, John, 1030.
 De Gregorio, A., 827, 1246.
 D'Emmerez, De Charmoy, D., 252.
 Doane, R. W. and Ferris, G. F., 592.
 Doolittle, S. P., 926.

- Dorogin, G. I., 459, 816.
 Drège, Isaac and Marloth, Rudolf, 125.
 Dusserre, C., 1238.
- EBNER, R., 1242.
 Edgerton, C. W., 573.
 Erlsson, Jakob, 689, 1230.
 Escherich, K., 710.
 Essig, E. O., 1142, 1145.
- FAIRCHILD, DANIEL, 360.
 Ferris, G. F. and Daane, R. W., 592.
 Fink David, E., 594.
 Fletcher, T. Bainbrige, 1137.
 Flint, Wesley P., 596.
 Ford, A. L. and Merrill, J. H., 826.
 Fracker, S. B. and Sanders, J. G., 946.
 Franklin, H. J., 470.
 French, C. Jun., 255.
 Froggatt, W. W., 1049.
 Froggatt, W. W. and Gurney, W. B., 601.
 Fryer, J. C. P., 603.
 Fulmek, L., 374, 1349.
 Fulton, B. B. and Parrott, P. J., 375.
- GABOTTO, L., 815.
 Gaimann, Ernest, 1329.
 Gibson, Edmund H., 1148.
 Gilman, J. C. and Jones, L. R., 355.
 Glover, W. O., 818.
 Gooderham, C. B. and Brittain, W. H., 717.
 Gough, Lewis, 714.
 Grandi, G., 832, 1251.
 Green, Ernest E., 591, 599, 606, 706.
 Grintesco, J., 586.
 Grossenbacher, J. G., 928.
 Grove, W. B., 1327.
 Gueylard, Prance and Partier, Paul, 1138.
 Guillochon, L., 1155.
 Gunn, D., 1147, 1149, 1151, 1152, 1153, 1154.
 Gurney W. B. and Froggatt W. W., 601.
- HAMILTON, A. A., 1042.
 Hammarlund, Carl, 118.
- Harned, R. W., 952.
 Harrison, J. W. H., 476.
 Harter, L. L., 589, 696, 1332.
 Haseman, L., 947, 1050.
 Hawkins, Lon A., 1129, 1231.
 Heald, F. D. and Studalther, R. F., 351, 352.
 Hedgcock, George, Grant, 126.
 Hedgcock, George, Grant and Long, William, H., 251.
 Henning, Ernst, 354, 1031.
 Herriek, Gleen W. and Matheson, Robert, 718.
 Howard, L. O. and Chittenden, F. H., 485, 716, 834.
 Howitt, F. E. and Mc'Cubbin, W. A., 941.
 Howitt, J. E. and Caesar, L., 1350.
 Howitt, J. E. and Stone, R. F., 925.
 Hubert, E. Ernest and Weir, James, 585.
 Hugues, Albert, 1143.
 Hutchinson, C. M. and Joshi, N. V., 122.
- IMMS, A. D., 1139.
 Isely, Divight and Cushmann, R. A., 1052.
- JAAP, OTTO, 571.
 Jablonowski, J., 134.
 Jackson, H. S., 703.
 Jagger, J. C., 927.
 Jarvis, Edmond, 1048, 1343.
 Javorski, A., 461.
 Jehle, R. A., 121.
 Johnson, James, 934.
 Johnson, John R., 116.
 Johnston, John R. and Cardin, P., 1317.
 Johnston, Harvey T. and Tryon Henry, 365.
 Jones, L. R. and Gilman, J. C., 355.
 Jones, Thomas H., 129.
 Jordi, Ernst, 1227.
 Joshi, N. V. and Hutchinson, C. A., 122.

- KABAT, F. L., 349.
 Kadosca, Gy., 254.
 Kalugin, N. M., 822, 823.
 Keissler, Karl, 464.
 Kemner, N. A., 257, 381.
 Klebahn, H., 1126.
 Knetchel, Wilhelm R., 480.
 Kolpin Ravn, F., Rostrup, S., Lind, J., 568.
 Kotzel, 950.
 Kraus, Rudolf, 1044.
 Krausse, Anton, 483.
 Kyropoulos, Paula, 1336.
 LAKON, GEORG, 933.
 Lantz, D. E., 1156.
 Lecaillon, A., 593.
 Leeftmans, S., 258.
 Leonard, M. D. and Stewart, W. B., 932.
 Lewis, R. G., page 1234.
 Lind, J., 353, 567, 575, 576.
 Lind, J., Rostrup, S. and Kølpin Ravn, F., 568.
 Link George, K. K., 1232.
 Long, William H., 475.
 Long, William H. and Hedgecock, George Grant, 251.
 Lushington, P. M., 687.
 Lustner, 713.
 Lyman, G. R. and Rogers, I. E., 807.
 Lyman, J., Briggs Jensen, C. A. and McLane, J. W., 1225.
 MACKIE, D. B., 711.
 MacRae, W. Anstead Rudolph D., 582.
 Maffei, Luigi, 701, 929.
 Maiden, J. H., 1136.
 Main, T. F., 264.
 Malenotti, Ettore, 824, 948, 1245.
 Malpeaux, L., 574.
 Mancini, Camillo, 923.
 Marloth, Rudolf and Drage Isaac, Louis, 125.
 Marshall, A. K., 589.
 Martelli, Giovanni, 715.
 Martin, J. B., 705.
 Mason, C., 590.
 Matheson, Robert and Herrick Glenn, W., 718.
 Matusevits, P., 263.
 McCubbin, W. A. and Howitt, F. E., 941.
 McKay, M. B. and Pool, Venus, W., 690, 1226.
 McLane, J. W., Lyman, J. and Briggs Jensen, W. A., 1225.
 McMurphy, James, 939.
 Meier, F. C., 1036.
 Melchers, Leo E., 244.
 Melhus, I. E., 119, 120, 245.
 Mercer, W. B., 700.
 Mercet, Ricardo Garcia, 1140.
 Merrill, J. H. and Ford, A. L., 826.
 Miège, Em., 117.
 Mignone, A., 602.
 Miller, David, 1344.
 Mira, Jenaro, 838.
 Montemartini, L., 1328.
 Morettini, A., 128.
 Munger Thornton, E., 805.
 Murray, J. M., 584.
 Mutto, Elisa, 930.
 NAIDENOV, V., 474.
 OBERSTEIN, 1146, 1236.
 Obiedoff, S. and Ravaz, L., 810.
 O' Gara, P. J., 242, 578, 579, 694, 695, 699, 1252.
 Osterwalder, A., 249.
 PACZOSKY, L., 704.
 Pantanelli, E., 1029.
 Papageorgios, P., 484.
 Parrott, P. J., and Fulton, B. B., 375.
 Parst, 839.
 Peglion, V., 692, 811, 942.
 Pemberton, C. E. and Back, B. A., 604.
 Petri, L., 348.
 Petri, L. and Adani, A., 819.
 Pole Evans, L. B., 1334.
 Pool Venus, W. and McKay, M. B., 690, 1226.
 Portier, Paul and Gueylard, France,

- Portier, Paul and Sartory, 1045, 1046.
 Pratt, O. A., 1130, 1331.
 QUAINANCE, A. L., and BAKER, A. C., 1241.
 Quayle, H. J., 377.
 Quinn, George and Andrew, H. W., 588.

 RAVAZ, L. and OBIEDOFF, S., 810.
 Ravaz, L., and Verge, G., 250.
 Reed, M. George, 1125.
 Rivera, V., 685.
 Riveros, E., 133.
 Roe, T. B., 468, 471, 472.
 Roepke, W., 1249, 1341.
 Rogers, I. E. and Lyman, G. R., 807.
 Rorer, James Birch, 1132.
 Rosenbaum, J., 358, 698.
 Rosenbaum, J. and Zinnsmeister, C. L., 248.
 Ross, W. A., 477.
 Rossikov, K. W., 1351.
 Rostrup, S., Kalpin Ravn, F. and Lind, J., 568.
 Rutgers, A. A. L., 253, 1229.

 SAILLARD, EMILE, 357.
 Salmon, E. S. and Wormald, H., 361, 473.
 Sanders, J. G. and Frucker, S. B., 946.
 Sartory and Portier, Paul, 1045, 1046.
 Sanzin, Renato, 135.
 Savastano, L., 376, 577.
 Schaffnit, E. and Voss, G., 938.
 Scheidter, Franz, 945.
 Schellenberg, H. C., 243.
 Schikorra, W., 1028.
 Schultz, S. Eugene, 1034.
 Schurmann, G., 260.
 Sebastianelli, A., 469.
 Seitner, 136.
 Semichon, 693.
 Sharples, A., 247, 812, 134.
 Shaw, F. J. F. and Ajrekar, S. L., 123.
 Sicard, L., 240.
 Siegler, E. H. and Simanton, F. L., 131.
 Siemaszko, V., 463.
 Silvestri, F., 1243.
 Simanton, F. L., 1053, 1141.
 Simanton, F. L. and Siegler, E. H., 131.
 Simone, F. P., 261.
 Smith, Erwin, F. and Bryan, Mary Katherine, 467.
 Smith Harry, E., 368, 369.
 Smith Loren, B., 481.
 Smith, O. Clayton, 936, 1037.
 Snyder, Thomas E., 1144.
 Sorauer, Paul, 1027.
 Splendore, Alfonso, 1056.
 Stahel, Gerold, 124.
 Stevens, N. E., 803, 1235.
 Stewart, V. B. and Leouard, M. D., 932.
 Stone, G. E., 1342.
 Stone, R. F. and Howitt, J. E., 925.
 Stranak, Franz, 486.
 Stuldalther, R. A. and Heald, D. F., 351, 352.
 Supino, F., 831.
 Swaine, J. M., 720.

 TAUBENHAUS, J. J., 697.
 Topi, Mario, 709, 829.
 Trägårdh, Ivar, 379, 390.
 Trotter, A., 583.
 Trudov, J., 688.
 Tryon, Henry and Johnston Harvey, T., 365.
 Tullgren, Alb., 259, 373.
 Turconi, Malusio, 817.
 Turner, W. J. and Baker, A. C., 719.

 UVAROV, B., 1239.

 VALLEAU, W. D., 356.
 Van Der Bijl, Paul A., 1033, 1333.
 Van der Goot, P., 595.
 Verge, G. and Ravaz, L., 250.
 Via Raventos, José, 922.
 Vincent, 482.
 Vivenza, A. and Ampola, G., 566.
 Voglino, P., 707, 708.
 Von Kirchner, O., 809.
 Voronikhine, N. N., 239, 462.
 Voss, G. and Schaffnit, E., 938.
 Vriens, J. G. C., 1234.

- WAGNER, J., 465.
Walters, J. A. R., 1040.
Waterston, James, 367.
Watson, J. R., 836, 837.
Webster, F. M., 597.
Weir James, R., 1039, 1135.
Weir, James and Hubert, E. Ernest,
585.
Weiss Harry, B., 825.
Wester, P. J., 1337, 1348.
Westerdijk, J., 940.
White, C. T. and Bailey, J. F.,
1041.
Whitney, L. A., 254.
Wildermuth, V. L., 1244.
William, C. B., 372, 598.
Witkowski, N., 607.
Witte, Hernfrid, 256, 366.
Woglum, R. S., 806.
Wolcott, George N., 479.
Wolf, Frederick, 581.
Wormald, H. and Salmon, E. S., 361,
473.
ZERRST, G. H., 804.
Zimmermann, H., 1124, 1325.
Zinnsmeister, C. L. and Rosenbaum,
J., 248.

